

COMMERCIAL CAR JOURNAL

JANUARY 1961

CCJ

CONSTRUCTION SECTION
follows page 112

THE MAGAZINE OF FLEET MANAGEMENT

A CHILTON PUBLICATION



ROLLING INTO OUR

50th YEAR

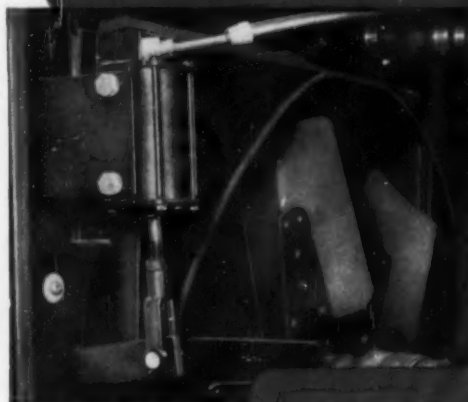
WITH NEW MOBILE OFFICE TO SERVE YOU BETTER AND
NEW FLEET IDEAS FROM NORTH • SOUTH • EAST • WEST



THE WHITE MOTOR COMPANY



**GAS OR DIESEL — WHITE, AUTOCAR, REO ...
KYSOR SHUTTERS S-T-R-E-T-C-H WORKING LIFE
BETWEEN MAJOR
OVERHAULS!**



KYSOR Air Activated Automatic Shutter controls mounted at rear of radiator on White Trucks.

Ideal engine operating temperature is maintained constantly under cold weather driving conditions, helping reduce engine cylinder wall wear and stretching work load operation between major overhauls.

These operational savings on both gas and diesel, we credit to Kysor Automatic Radiator Shutters which aid in maintaining a constant engine operating temperature. That's why White, Autocar and Reo trucks are KYSOR equipped.

Kansas City Branch Manager
The White Motor Company

KYSOR

Automatic Shutters

KYSOR HEATER COMPANY

CADILLAC, MICHIGAN

● More details? Circle 124 on reply card inside back cover



Greyhound knows that...

**...dependable engine performance
is a secret of "on-time" schedules**

This is one of the important features of Greyhound service. It is one of the reasons so many travelers accept Greyhound's invitation to "take the bus and leave the driving to us."

Greyhound uses Pedrick Formflex Chrome Piston Ring Sets in its buses for extra assurance of dependable engine performance. The ease and simplicity of the installation, the way Pedrick rings restore full power quickly, provide maximum oil and fuel economy and last so very long are other important reasons for Greyhound's use of Pedrick rings.

So, in *your* fleet, to reduce down-time and improve operating economy, always install Pedrick FORMFLEX Chrome Piston Ring Sets—the *all-purpose* piston ring installation. Wilkening Manufacturing Co., Philadelphia 42, and Toronto 2.

DEPEND ON

Pedrick

FOR THE RIGHT RING JOB

● More details? Circle 127 on reply card inside back cover



SPECIAL TRUCK for a Special Job 98

Commercial Car Journal's new Mobile Editorial Office couples many engineering firsts with unique facilities. Here's what makes it tick—and what it means to you

NORTH

Darling Freight Adds "How" to "What" in PM Checks 102

Fleet's successful PM program spells out in detail how to perform each service and inspection

EAST

COD Means Long Life for Sun Oil Company's Rigs 104

COD (check on delivery) is a key PM service done on all new equipment before it enters service. Here's why

SOUTH

How to Get Full-Time Safety from Part-Time Drivers . . . 107

"Jack Rabbit Line"—Sentinel-Star Express' delivery fleet proves it can be done without safety meetings

WEST

Belyea Pulls Longest Dam Haul on Record 109

Belyea Trucking Co. hauls concrete to Glen Canyon Dam at the rate of 6000 barrels a day for three years

Plus . . .

Ideas for Fleetmen from Three New Terminals . . 81

New High Flotation Tires for Vehicles 144

Ten Top Dollar Volume Common Carriers . . . 177

What's New . . .

In Trucks	114
In Fleet Cars	115
In Trailers	118
In Engines	119
In Fleet Vehicle Purchases . .	120
In Buses	122
In Vehicle Accessories . . .	124
In Shop Equipment	132
In Publications	196

Departments . . .

The Overload	5
At Your Service	9
Dates and Doings	24
Fleet Training Courses . . .	24
Up Front with CCJ	33
Laugh It Off	96
Bulletin Board	168
New Truck Registrations . .	172
January News Roundup . . .	177
Among the States	181
Safety Awards	182
Equipment Purchases	182
Fleet Notes	184
Factory Flashes	184
Index to Advertisers	192

JANUARY 1961

VOL. 100

NO. 5

Charles Bartlett Rawson, Editor



Ernest S. Forest.....Managing Editor
Jack Colgan.....Feature Editor
Edward K. Shea.....Technical Editor
James D. Winsor.....Associate Editor
Patricia P. Lounsbury.....Assistant Editor
Joseph Geschelin.....Detroit Technical Editor
Edward Janicki.....Detroit News Editor
George Baker.....Washington
Neil R. Regeimbal.....News
David R. Heinly.....Editors
R. Raymond Key.....Pacific Coast Editor
Kenneth Rose.....Midwest Editor
Howard Kohlbrener.....Art Director
Marcus Ainsworth.....Statistician
Harold M. Nelson.....Specifications Editor
Paul Wootan.....Washington Member
of the Editorial Board
Robert Gunning.....Readability Consultant

Russell W. Case, Jr., Publisher



C. W. Hevner.....Assistant Publisher
E. H. Miller.....Advertising Manager
George Jacovides.....Circulation and
Marketing Assistance Manager

Executive and Editorial Offices . . .
Chestnut & 56th Streets, Philadelphia 39, Pa.
Sherwood 8-2000

Regional Offices . . .

Atlanta 3, Ga.J. W. Sangston
32 Peachtree St., N. E.Jackson 3-6791
Chicago 1, Ill.C. F. Moss, J. D. Moss
360 North Michigan Ave.Randolph 6-2166
Cleveland 15, Ohio...W. P. Saunders, R. H. Kendall
930 B. F. Keith Bldg.Superior 1-2840
Dallas 6, Texas....William J. Smyth
Room 109, Meadows Bldg.Emerson 8-4751
Detroit 2, Mich....M. J. Kenealy, J. P. Jennings
1015 Stephenson Bldg.Trinity 5-2090
Los Angeles 57, Cal....L. H. Jackson
198 South Alvarado St.Dunkirk 7-4337
New York 17, N. Y....R. N. Caird, Jr., L. I. Kastell
100 East 42nd St.Oxford 7-3400
San Francisco 3, Cal....Frank W. McKenzie
1355 Market StreetUnderhill 1-7107
Washington 4, D. C.Editorial Offices
1091 National Press Bldg.Executive 3-3474

Commercial Car Journal, one of the publications owned by the Chilton Company, is published monthly at Chestnut & 56th Sts., Philadelphia 39, Pa. Subscription price: United States and Possessions, \$3.00 per year; all other countries \$15.00 per year. Single copies are 50¢ except April and November issues which are \$1.00 each. Accepted as controlled circulation publication at Philadelphia, Pa.



Chilton Company, Officers and Directors



President—G. C. Buzby. Vice-Presidents—P. M. Fahrendorf, Leonard V. Rowlands, George T. Hook, Robert E. McKenna. Treasurer—William H. Vailar. Secretary—James A. Montgomery. Directors—Maurice E. Cox, Frank P. Tighe, Everit B. Terhune, Jr., Russell W. Case, Jr., Charles Hainle, John H. Kofron, George E. Cameron.

Stanley Appleby—Comptroller
John H. Kofron—Chilton Research Director

Copyright 1961 by Chilton Company

COMMERCIAL CAR JOURNAL, January, 1961

In less time than it takes to read this sentence, the driver of a stalled truck, car or bus can ignite and show a Kilgore Safety Flare!



LIFE-SAVING LIGHT DEPENDABLE KILGORE FLARES

In all kinds of weather, when lights fail or visibility is limited, your vehicles are safe. Kilgore Flares placed ahead, beside and behind a stalled truck provide bright longer warnings stand guard against highway hazards. Kilgore Automotive and Truck Flares ignite instantly, flame power substantially exceeds minimum requirements. Made with plastic plug base for greater rigidity. Available with spikes, without spikes, with wire stand, with wooden handles in many sizes for trucks and cars.

LONGER EVEN BURNING BETTER PERFORMING QUICKER STARTING

Safety Red Flares for highway night-time emergencies
See your dealer or write International Flare Signal Div.

Kilgore, INC. Westerville 2, Ohio

More details? Circle 128 on reply card inside back cover

NEED A TRUCK "YESTERDAY?"



for rush jobs, for peak periods, for emergencies . . .

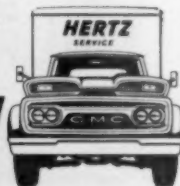
Hertz specializes in getting you the truck you want—and getting it to you fast! You get new Chevrolet, GMC or other famous make trucks. And you can choose from a wide variety of types—van, stake, panel, pickup or walk-in. Tractors and trailers are also available in many cities. All you need is proper driver's license and identification. And Hertz low rates include insurance, gas and oil, even if bought on the road.

Play it smart! Don't tie up needed cash in "stand-by" trucks that are used only as replacements or during peak periods. Rent trucks from Hertz *when* you need

them—and conserve your capital! Trucks are available by the hour, day or week. Also available on long-term leasing basis for economical year-round operation.

no investment . . . no upkeep

**RENT HERTZ
TRUCKS**



● More details? Circle 129 on reply card inside back cover

There's No Place to Go but UP

EVERY FEW YEARS the prophets of gloom get loose. They were real busy last fall predicting our first quarter slump. In large measure they succeeded in developing such a good wait-and-see attitude that right now many a loading dock has room for a football game or two.

Of course, there are some who will say business was never so good. More will admit the pickings are a little slim. Only a very few, we hope, have a real pessimistic attitude.

For the simple truth is: There's no place to go but up! Here at CCJ we're well started on the mammoth task of producing a 50th anniversary issue later this year. As we look back, and as we look ahead, *all* the curves go up.

But not one of them goes up in a straight line. Sometimes they go up, sometimes down, and sometimes they plateau. But in the long pull they always go up more than they go down.

Right now, for most of us, they're down a little. Do we sit back and cry the blues? Or do we plan for bigger things to come? Fortunately, the industry is virile enough to take the latter course. In late December I had a chance to talk with several leaders.

One of them, a common carrier, said he normally held his sales meeting in June. This year it will be in February. The theme: When traffic breaks loose lets be sure we get it, and are equipped to handle it.

Another, in food, said the hell with business in general and business indexes in particular. Maybe capital investments and building starts—and even steel—are off. But even the economists predict at least a slight rise in personal spending. "People are going to eat, and there are more people doing it," he concluded, "and I'm gearing for the biggest year ever."

Then there was the guy who had been studying bank deposits, and politics. There is more money in personal bank accounts than ever before in

history, he found out. And there is a brand new team on the Washington front. "People are people," he philosophized. "They just plain want to wait and see, before opening up the purse strings."

On the manufacturers front, its just a little tougher. Few fleetmen are willing to buy major equipment in advance of current needs . . . and for a very interesting reason. Money and prices are not as important to the fleet's leaders as obsolescence.

That in effect is a wonderful, back-handed compliment to their suppliers. They know that even a few months hence the products will be better and they don't want to be stuck with anything but the best.

And there's a bright spot there for the forward-looking manufacturer. We remember a bus manufacturer who waited nearly ten years for a major city to scrap its over-age fleet. But when the huge order finally came through the maker *was ready* with the product the city wanted, at a price it could afford.

That was one of a handful of manufacturers guarding a handful of major cities. For other hundreds of manufacturers guarding thousands of fleets, it's a very different job. But it can be done through continuing product improvement, aggressive salesmanship, and advertising leadership.

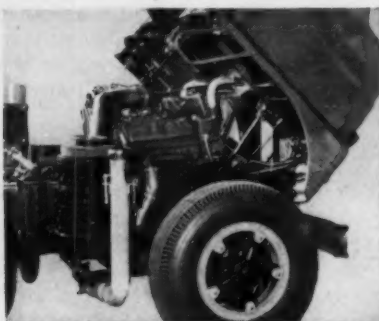
That's often a tough one to sell, when production lines are slack. But we're mighty proud to note that fleet suppliers have put more advertising pages into this issue than they did in the boom period of January a year ago. The big majority are expressing *confidence* as opposed to the wait-till-things-get-better attitude. They're betting hard dollars on you.

So are we, with the biggest and best editorial schedule in our history. That's our pledge for 1961 . . . to help you make the most of both current and future opportunity.

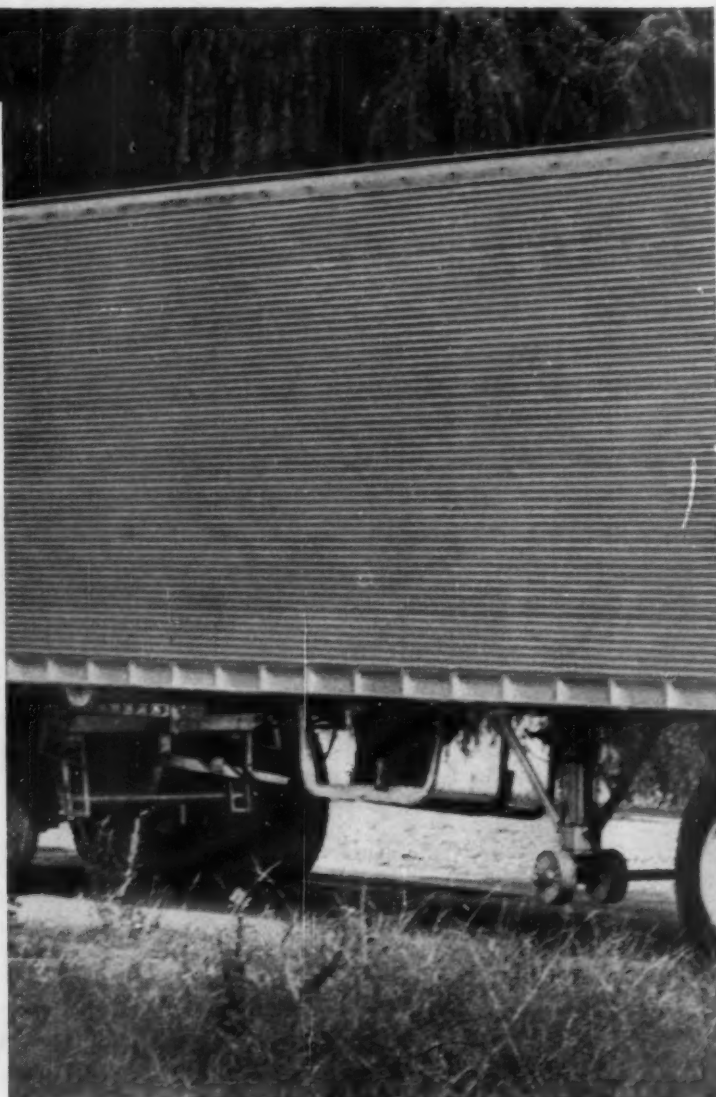
Bart Rawson
Editor



Cab weight is cut 480 lbs. through distinctive lightweight design in the DCO-405 Series. With BBC dimensions of 54, 72, and 80 inches, cabs are identical in appearance, strength, and riding comfort to standard steel construction. An exclusive welding process eliminates unsightly rivets and provides greater strength throughout. Cabs are corrosion-resistant treated inside and out.



Effective diesel engine power is available in "V" and "in-line" series to give greater weight reduction without hampering the units' outstanding performance. Tilt-cab design for easy routine maintenance of all major components.



This INTERNATIONAL model means "lightest

Here's DCO-405 quality at only 8,970 lbs.

Weighing in at a lean 8,970 lbs., INTERNATIONAL DCO-405 Series Trucks now offer you drastic weight-saving advantages with their super-lightweight cab and "V-type" diesel engines. They can give your operation the trimmest units in their class at the greatest possible weight savings and economy in operation.

Cabs designed for DCO-405 Series save up to 480 lbs. in cab weight—an additional reduction of 500 lbs. can be made with the "V-type" engine without sacrificing roadspeed or horsepower.



in weight, lowest in operating cost!"

See your INTERNATIONAL Truck Dealer or Branch for details on the trucks that really make the grade when it comes to performance and bigger payloads, to earn higher profits.

INTERNATIONAL® TRUCKS **IH.**

WORLD'S MOST COMPLETE LINE

International Harvester Company, Chicago • Motor Trucks • Crawler Tractors
Construction Equipment • McCormick® Farm Equipment and Farmall® Tractors



B.F. Goodrich moves the goods to market

FURNITURE EXPRESS, INC., FINDS TRACTION EXPRESS TIRES GIVE 167,000 MILES ON THE ORIGINAL TREAD

FROM Jamestown, N.Y.—one of the country's biggest furniture manufacturing centers—Furniture Express trucks fan out over 21 states to deliver the goods to retail dealers. Trucks roll 14 hours a day, 7 days a week on round trips as long as 2400 miles. This is the kind of work B.F. Goodrich Traction Express tires are built for—and at 167,000 miles they've given double the service of any other tire the company has ever used.

Part of the credit goes to the extra-thick Traction Express tread with its

massive cleats. Part goes to the B.F. Goodrich Flex-Rite Nylon cord body. Flex-Rite Nylon is twice as strong as ordinary materials, resists heat blowouts and flex breaks. The Traction Express can be retreaded over and over, as Furniture Express has discovered. Result: low tire cost per mile.

Whatever your truck tire needs, it will pay you to give your B.F. Goodrich Smileage dealer a call. He has the tires, the service facilities, and the know-how to help you get the most

out of your truck tire dollars. Your BFG dealer is listed under Tires in the Yellow Pages. *The B.F. Goodrich Company, Akron 18, Ohio.*

Specify B.F. Goodrich Tubeless or tube-type tires when ordering new trucks or trailers



Handling Spark Plug Wires
Ford Truck Power Steering
Bus Mechanic Classification
Servicing Chevron Starting System
Cummins Engine Fan-Nut Torque
Studebaker-Packard Water Pump
Glycerine Helps Ammeter Fluctuation
Studebaker Truck Driveshaft Noise
Main Bearing Cap Screws on Ramblers
1960 Comet Brake Pedal Return



TIMELY NOTES ON TRUCK, BUS, PASSENGER CAR
 FLEET MAINTENANCE and OPERATION
 briefed by ED SHEA, Technical Editor

Handling Spark Plug Wires

THE PRACTICE of using spark plug wires as handles when disconnecting the wires from the plugs can result in damage to the wires. The radio resistant-type wires used today can be stretched causing increased resistance which under certain conditions can cause misfiring of the spark plugs.

Recommended procedure for removing all spark plug wires from the spark plug is by grasping the boot at the end of the wire. To help removal, a rotating motion should be applied to the boot to break the adhesion between the boot and the spark plug porcelain.

Also, avoid puncturing the spark plug wire with a probe. This damages the plug wire and the probe could cause separation of the conductor, which is a linen cord impregnated with carbon. This results in excessive resistance. Also, breaking the rubber insulation with a probe allows secondary voltage to arc to ground, resulting in an ignition miss.

Ford Truck Power Steering Adjustment

AN IMPROPERLY adjusted power steering system in 1959-60 Ford trucks may cause power steering instability, over-steering, lack of power assist, lack of "road feel" or partial lockup in turns.

Ford suggests the following checks and corrections when these conditions exist:

1. Check and adjust the power steering pump drive belt tension.

2. Inspect the entire system for an indication of leaks. Tighten all loose connections.

3. Check the fluid level in the pump reservoir. In an overfilled reservoir, normal movement of the fluid, plus heat expansion, forces the surplus fluid out the filler cap breather hole. Fluid then drips over pump, hoses and engine parts. This is often mistaken for pump leakage. A low fluid level can allow air to enter the system. This causes noise, lack of assist and hard steering.

4. Check and adjust the steering gear worm bearing preload and worm and roller mesh load.

5. Check and adjust the steering spindle stops and steering arm stops.

6. Check the operation of the control valve assembly.

7. Check pump pressure output.

8. Check steering linkage for proper lubrication. Too much lubricant on control valve assembly may bind-up the inner sleeve and prevent full movement of the spool valve. It can also distort spool valve seals, causing control valve leakage.

Bus Mechanic Classification

AT THE recent American Transit Assn. annual meeting, personnel classifications got a real kicking around. Almost everyone has a different union contract making it difficult to standardize—but here's the thinking . . .

Unless a union contract specifically calls for a fixed ratio of mechanics to buses or mechanic's helpers to mechanics first class, it's best to do the following . . .

1. Promote from within.

2. Have the following classes of personnel—senior mechanic, mechanic, helpers, apprentices.

3. Train your own help and fire an apprentice after three months if he isn't learning.

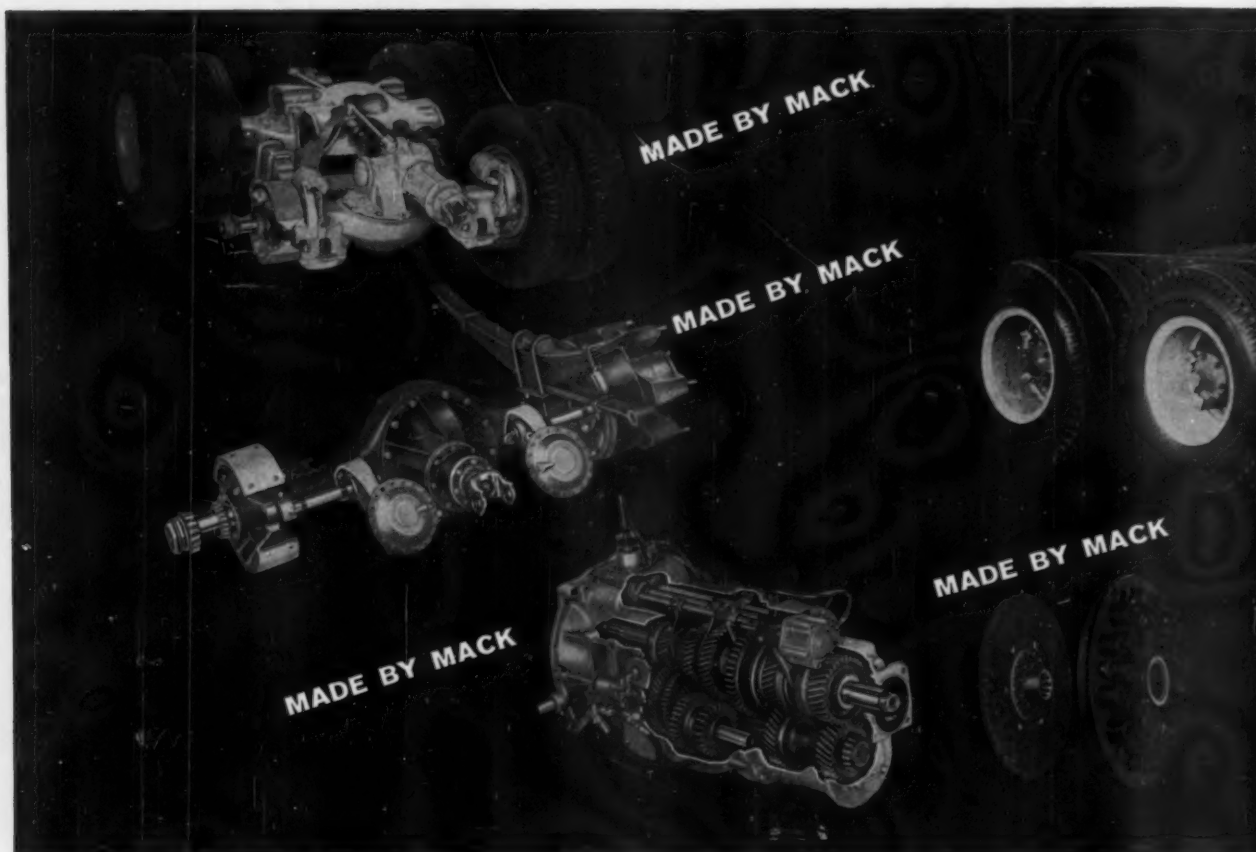
4. Promote from helper to mechanic within three years if possible.

5. Fill senior mechanic's vacancies as needed by promoting on merit not seniority.

Bill Kuntz of Niagara Frontier Transit and others at the meeting define the type of work
 (TURN TO PAGE 12, PLEASE)

Mack STANDS FOR UNDIVIDED RESPONSIBILITY

You get undivided responsibility when you buy a Mack. Undivided because Mack practices Balanced Design—building far more of its vital truck components than any other truck maker in the heavy-duty field.



But what of other manufacturers?

Without exception they buy many or all of their major components from outside vendors... engines, clutches, transmissions, front and rear axles, and drives.

Too often this means split responsibility. Who guarantees the component? Who provides the service on it? Sometimes the truck manufacturer... sometimes the component manufacturer.

Is this good? Mack feels it is not. When you purchase a Mack you must receive unqualified satisfaction. To insure this satisfaction, Mack insists on building most of its vital components. In this way Mack not only controls the quality of its components, but it can be sure its components will work in harmony... as an integrated unit.

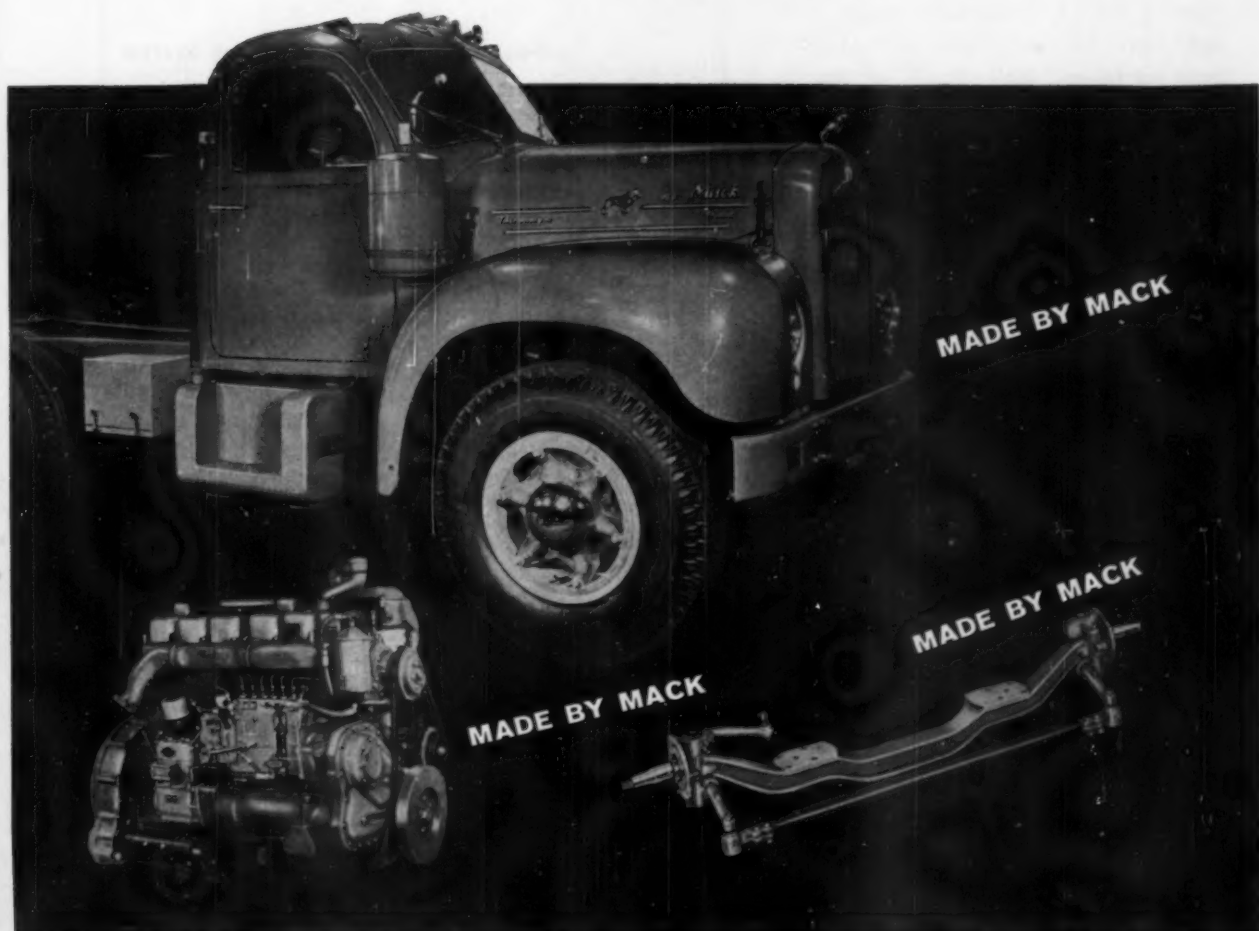
You cannot have **Balanced Design** with mass produced parts—parts built to the lowest common denominator of a broad area of manufacturers. For instance, how can the same transmission fit equally well behind a gasoline engine of 400 cu. in. displacement and a diesel engine with a displacement of over 700 cu. in.? It can't—not with such a wide difference in torque output. All you can have is a lower level of standardization. And why pay a difference of a thousand dollars or more when the vital components of the highest priced competitive makes are identical in quality, construction, design and manufacture to the vital components of the lowest priced makes. Peel off the skin and they all look the same.

Not so with Mack and that's why we can assume undivided responsibility for the entire truck. We built it and we stand behind it—100%. Who else can say the same? Mack Trucks, Inc., Plainfield, New Jersey. Mack Trucks of Canada, Ltd., Toronto, Ontario.

BUILT LIKE A



Mack



HOW TO COMPLY WITH NEW ICC SAFETY REGULATIONS

free Fleet Kit Available

You can save countless hours and avoid costly errors with Arrow's new ICC Fleet Kit. Large illustrated diagrams, simplified instructions, charts for computing changes and additions for each vehicle, cost estimating forms, wall charts and other important data are included in the kit.

Whether your fleet has 5 or 500 units the kit will be a valuable working tool. The new ICC Safety Regulations are effective July 1, 1961. Get your free kit today! See your jobber or simply attach this page to your letterhead and mail direct to Arrow Safety Device Company, Georgetown, Delaware.



**MALLET TEST
DISPROVES
"SHOCKMOUNTING"
METHOD**

**IF YOU
HAVE NOT
TRIED THIS
TEST... SEE
YOUR ARROW
JOBBER...YOU'LL
BE AMAZED!**

ARROW

DESIGNS WITH THE FLEET IN MIND

ENGINES



AT YOUR SERVICE

Continued from page 9

each job carries and assign people accordingly. Helpers are assigned as needed, with no fixed ratio.

There was almost full agreement on training the new man rather than trying to hire an experienced mechanic since bus fleets don't pay as well. An on-the-job training program is generally used. Many fleets said they used a class A or senior mechanic for lube work. Feeling was that the extra money spent was worth it since the man not only did the job right, but he also found and corrected minor deficiencies that otherwise went undetected until they become serious. (It was also felt that getting weight off the front wheels was important to a good front end lube job.)

Servicing the Chevron Starting System

HERE'S A TIP if you're having cold weather starting trouble with the Chevron starting system. Foreign material may be plugging lines or jamming check valves. Both conditions are usually noticeable because of considerable resistance or complete lack of resistance of priming pump plunger. If primer is hard to force home it indicates plugging between primer and outlet nozzle in the manifold. If primer seems loose and develops no pressure usually fluid is blocked between puncturing tool and the primer, or the check valve is not clear.

In some cases, broken particles of the gelatin capsules have been found. These should always be cleaned from the screen at the bottom of the puncturing tool. In cases of complete clogging with gelatin, they usually can be cleaned out with hot water which will melt the gelatin.

Cummins Engine Fan-Nut Torque

CUMMINS Service Topics says that insufficient tightening of a fan hub may result in damage to the radiator or engine. On engines in the H and NH Series with high-mount fans, the 1¼-in. fan-hub-mounting lock nut must be tightened to 400-450-lb ft torque. Cummins suggests the following method for tightening the nut if a torque wrench is not available:

(TURN TO PAGE 16, PLEASE)



MORE ORIGINAL AND RECAP MILEAGE AT LESS COST

With Lee Super DeLuxe Highway Nylons you can be sure of it

You can have your truck tire economy as simple as 1-2-3 with Lee Super DeLuxe Highway Nylons. These outstanding tires give you 1) long original mileage; 2) extra recaps; and 3) lowest possible cost per mile. The three big advantages that add up to sure savings.

Not just nylon, but Lee's exclusive Super-Tensile Nylon, goes into the construction of these tires. This tough cord provides the ultimate protection against the impact bruises, blowouts and moisture damage that take their toll of tires built with ordinary cord. Produced by a special process, Lee Super-Tensile Nylon reduces the effects of heat and flexing; makes cord separation virtually impossible.

You get additional assurance of extra mileage with the wide, flat tread—made of the best type of natural rubber. Other Lee improvements in the tread design result in better traction and cooler running.

So why not specify Lee Super DeLuxe Highway Nylons, tube or tubeless, for all your units. They give you the greatest assurance of long original mileage and maximum recaps. And when it comes to retreading, you can't do better than to specify Lee Premium Black Diamond Tread Rubber, branded for your protection.

Shown is the Lee Super DeLuxe Highway Nylon. Whatever your truck tire needs, there's a Lee that's right for the job.

**FREE! Antique Auto
"Coffee Break" Mug**



I would like one of your free gift coffee break mugs and information on Lee Truck Tires.

(Tear out and attach to your letterhead)

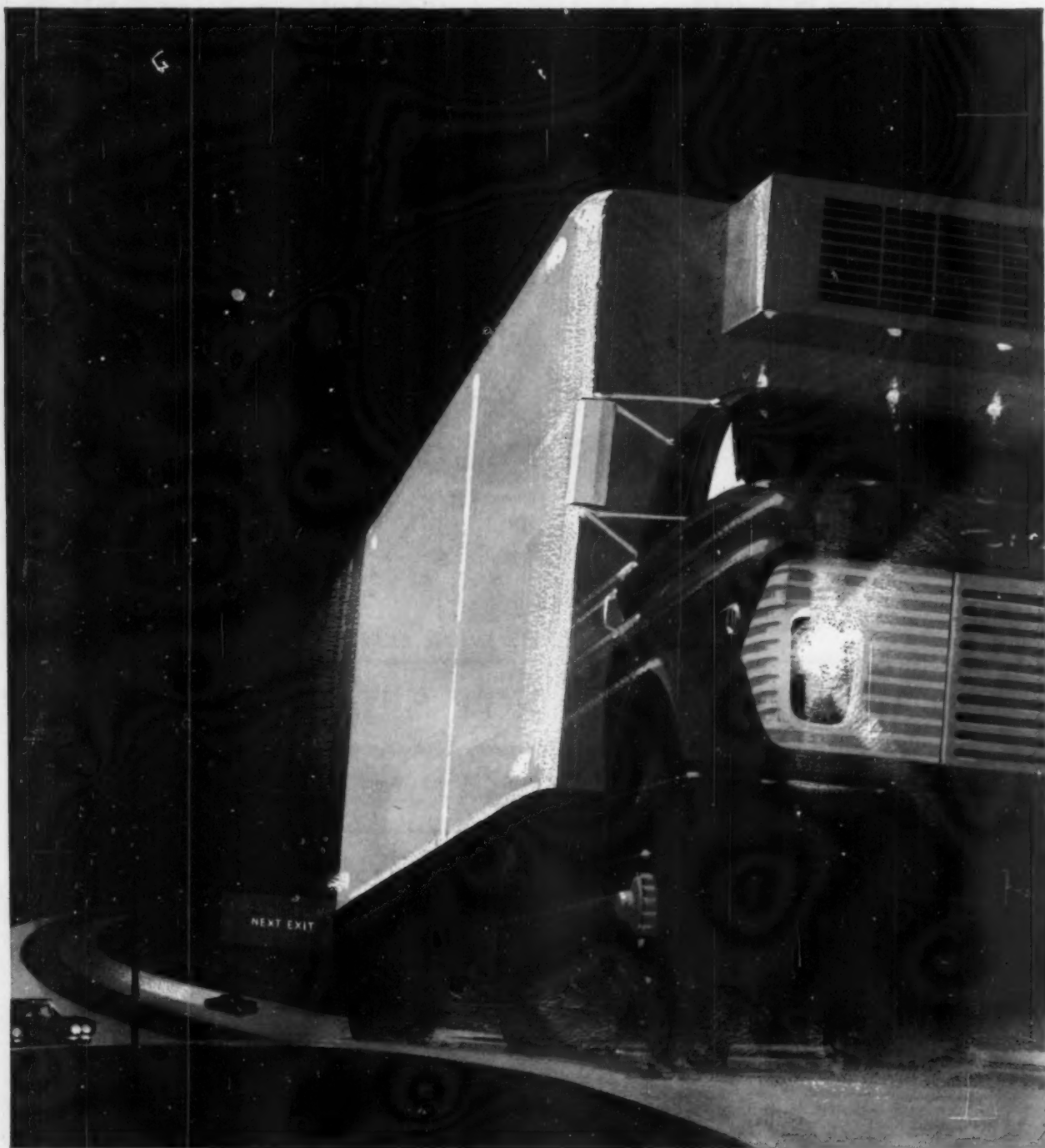
CCJ


LEE RUBBER & TIRE CORPORATION



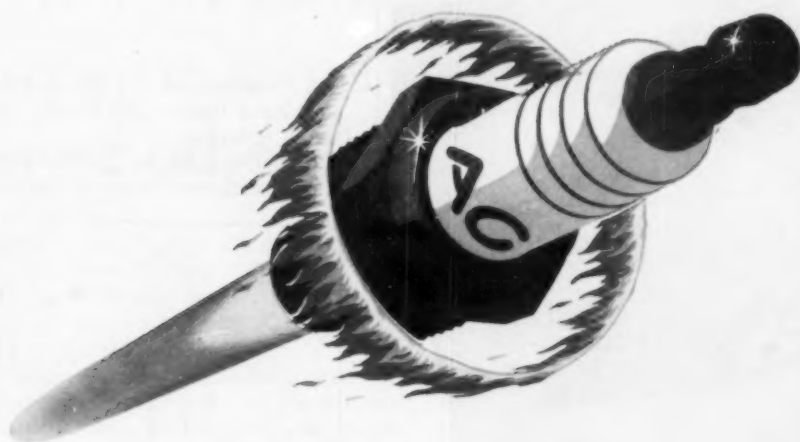
CONSHOHOCKEN, PA.

hot tip for truck



AC SPARK PLUG  THE ELECTRONICS DIVISION OF GENERAL MOTORS

STAMINA



In all light and heavy-duty applications, AC Fire-Ring Spark Plugs are ignition-engineered to give you peak power throughout thousands of load-carrying miles. It will pay you to specify performance-proved AC Spark Plugs—made truck-tough to match your power requirements.

STAMINA STAMINA

In light-duty applications—AC's exclusive Hot Tip heats faster to clean itself—cools faster to prevent power-robbing pre-ignition—an exclusive feature to sustain maximum power.

In all applications—AC's are engineered to meet every engine's exact power needs. AC's complete spark plug line includes a heat range for every type of operation to assure maximum truck stamina.

STAMINA

In heavy-duty applications—AC's superior sealing qualities prevent gas leakage to assure longer peak power output and longer spark plug life.



FIRE-RING
SPARK PLUGS

▷▷▷▷▷▷ POWER ACHIEVERS FOR THE TRUCKING INDUSTRY

Save maintenance money with faster cleaning



**THIS BOOKLET
TELLS HOW!**

Here's a free "how to" book on fleet cleaning operations that gives you the latest information on up-to-date practices, materials and methods for getting the most out of every maintenance hour — and every maintenance dollar.

Speaking from a half century of research and experience, the book gives practices and techniques on:

- cold cleaning of parts
- cleaning engines in-place
- hot tank cleaning
- steam-detergent cleaning
- conditioning cooling systems
- paint stripping
- pre-paint conditioning
- body washing
- interior tank cleaning
- garage maintenance



Send for your free copy today. Write Oakite Products, Inc., 26D Rector Street, New York 6, N. Y.

In our 52nd year

Technical Service Representatives in Principal Cities of U. S. and Canada

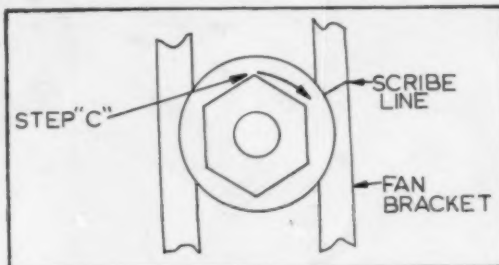
FLEET CARS



Continued from page 12

A. Tighten the lock nut approximately 75 deg past hand tight. This should equal about 120-150 lb ft torque.

B. Scribe a line on the fan bracket (as shown) in line with one corner of the nut.



C. Tighten nut one hex, or until next nut corner is in line with scribed line (nut must be turned 60-70 deg).

Still another method of tightening this nut would be to apply 300-lb load to an 18-in. open-end wrench, to achieve desired torque.

Studebaker-Packard Water Pump Noise

THE CURES for the two types of water pump noises that might occur are the same for all Studebaker-Packard passenger car models, says S-P. The two general types are seal and rough bearing noises. The seal causes a "squeal" when the engine is idling. The rough bearing "growls" at somewhat over an idle speed.

If either of these noises exists, the first thing to do is adjust the fan belt. If you still have the rough bearing growl after proper fan belt adjustment, replace the water pump. If it's a seal squeal and it's not eliminated, add a water pump lubricant to the coolant. If that doesn't get rid of it, replace the pump.

The addition of water pump lubricant to the coolant whenever a new pump is installed is good insurance against seal noise.

Glycerine Helps Ammeter Fluctuation

ARE THERE any IHC B-line models in your fleet with too much fluctuation in the ammeter? This condition doesn't necessarily mean (TURN TO PAGE 20, PLEASE)

First Operational Reports in!

New '61 Larks in actual fleet service save 10% • 14% • 16% • 25% over other fleet cars

What should you expect to gain when you put '61 Larks into your own fleet? Here is a certified report by the United States Testing Company, based on daily use of The Lark under normal operating conditions in four giant fleets:



All drivers were favorably impressed with the increased power and acceleration of the new Skybolt Six engine — the responsive, easy steering of the new steering/suspension complex — the excellent handling and maneuverability all through.

And the report makes specific cost comparisons with the most widely used fleet cars—Chevrolet, Ford, Plymouth, in comparable models. Here's what you save:

Initial cost averages 14% less ... Insurance (with Illinois as the basis) costs 10% less ... Registration and Taxes (Illinois) are 16% less ... Tires save approximately 15% ... Repairs and Replacements (from MOTOR's 1960 Crash Book) average 25% less ... Gas Consumption (based on 5,000 everyday drivers) was more than 15% better.

These are unmatched advantages in economy. In fact, they top the savings on any other compact car as well. And they show you why each day's mail brings such Lark Fleet orders as 35 for a mid-western route sales operator, 566 for a western state, 134 for an eastern taxi fleet, 51 for one telephone company, 38 for a municipal Police force in the southwest.



THE **'61 LARK** BY STUDEBAKER
YOU HAVE TO DRIVE IT TO BELIEVE IT!

GET THE FULL STORY ON FLEET SAVINGS!

Fleet Sales Division, Studebaker-Packard Corporation, South Bend 27, Ind.

- ☐ Send us informative literature only
- ☐ Have a factory representative call me for an appointment
- ☐ Also send information on Studebaker truck savings

NAME _____

PLEASE PRINT

TITLE _____

COMPANY _____

ADDRESS _____

CCJ 1-61 F5



They won the when they switched or how "The Biggest Difference in the



THE BIGGEST DIFFERENCE IS A BIG MILEAGE PLUS

The thicker, tougher, nonskid tread of the Hi-Miler Cross-Rib (up to 60% deeper than conventional tires) is specially designed and compounded. This big difference can be measured in miles and miles of extra trouble-free service. But try Cross-Ribs, and let them prove themselves to your satisfaction!

**HI-MILER
CROSS-RIB—**
long distance cham-
pion on drive wheels



TOP TEAM FOR BIG TRUCKS

**TRACTION
HI-MILER—**
for long mileage, easy
steering, precision
balance on front
wheels



"Our job is delivering full loads of empty bottles," writes Mr. J. Cross of Cross Transportation. "And delivering them on time is most important. Our customers, many of them handling perishables, depend on us to keep their production lines flowing.

"So believe me, we're delighted with Hi-Miler Cross-Ribs on our drive wheels. They're usually good for at least 100,000 'on-time' miles—without a problem. Then we just put them on the trailers and they still run and run.


"The tires we used previously gave only 40,000 to 50,000

miles—and had to be watched mighty carefully. We estimate the switch to Cross-Ribs cut our tire cost-per-mile more than 50%."

This report from a big fleet owner is typical of many received on the extra durability and dependability of Hi-Miler Cross-Ribs. Look at the diagram at left, above, and you'll easily see why.

The big difference you get in Cross-Ribs is typical of what you can expect from any truck tire in the complete Goodyear line. They give you long tire-life insurance in

GOOD



battle of the bottles to HI-MILER CROSS-RIBS

Business" cut tire cost-per-mile by more than 50%



the form of the biggest, strongest beads plus the toughest bodies, made with exclusive Triple-Tempered 3-T Process Cord (Nylon or Rayon). And through use of advanced super-toughening agents, Goodyear tires run longer than competitive makes.

What's more, all Goodyear Truck Tires are better-built for today's smoother-riding trucks. Whatever the size or number of your trucks, you'll be miles ahead when you buy or specify Goodyear. See your Goodyear dealer or write: Goodyear, Truck Tire Dept., Akron 16, Ohio. Lots of good things come from Goodyear.



KEEP MILEAGE COSTS DOWN WITH GOODYEAR MILEAGE ENGINEERING SERVICE

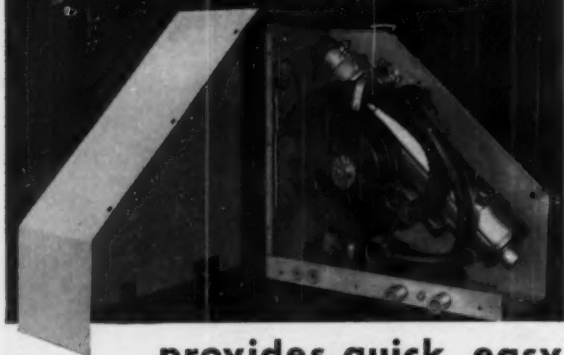
New Goodyear service helps you get maximum benefit from long-wearing Goodyear Truck Tires. For example, the new Goodyear Cross-Rib/Rotation plan of tire scheduling enables you to make most effective use of Cross-Ribs—keep your trailer tire needs in balance. Provides new lows in capital investment and cost-per-mile. For information, write Goodyear, Truck Tire Dept., Akron 16, Ohio.

Hi-Miler—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

YEAR

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

South Wind PREHEATER



**provides quick, easy
starting in coldest weather!**

● The South Wind Preheater gives you the most practical and inexpensive way to solve cold weather starting problems. It pre-heats the engine coolant rapidly and circulates it through the block to heat the engine for quick, easy starting. The Preheater automatically maintains the temperature of the engine coolant between 140° and 160°F.

With the South Wind Preheater, trucks can be stopped and parked anywhere with easy starting. Outdoor winter storage is practical even at extremely low temperatures. Construction equipment can be shut down at any time without regard to the ambient temperature. Stationary engines stay warm, ready for rapid starting when needed.

The South Wind Preheater can reduce your operating costs. Write today for complete information.

Check these features of South Wind Combustion Heaters:



Normally maintenance-free—parts and service are available nationally.



Automatic thermostatic control.



Economical to operate—maximum heat output at minimum cost.



Operates independently of the engine, but uses fuel and electrical power from the vehicle system.



South Wind
DIVISION
STEWART-WARNER
CORPORATION

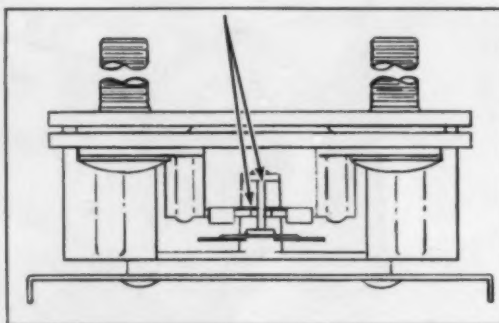
1514 Drover Street • Indianapolis 7, Indiana

TRUCKS



Continued from page 16

a defective generator or voltage regulator or that there are shorts in the system.



International Harvester recommends that you remove the ammeter from the dash and put a drop of glycerine on each pointer, as shown.

Studebaker Truck Driveshaft Noise

IF YOU ARE experiencing driveshaft noise on 1/2 and 3/4 ton Studebaker Champ series trucks, here's what to do. On 112-in. wheelbase models, replace the driveshaft with a new special shaft having sound deadener inserts.

On 122-in. wheelbase models, replace the front shaft only with the special type if the noise is heard only during acceleration. When the noise occurs on deceleration, replace both sections of the drive line.

Main Bearing Cap Screws on Ramblers

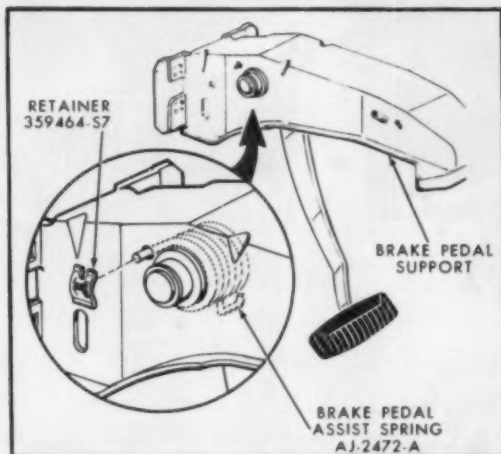
THERE ARE two different lengths of main bearing cap screws used in Rambler 6-cyl cast-iron engines. The shorter ones (2 7/16 in.) are used on the front and rear main bearing caps. The longer ones (2 13/16 in.) are used in both intermediate bearing caps.

If the longer screws are used in the front or rear bearing caps, they will bottom in their threaded bore, resulting in excessive oil clearance.

If your fleet operates Ramblers using this engine, American Motors suggests you warn your mechanics about the different length screws when they are inspecting or replacing main bearings.

1960 Comet Brake Pedal Return

IF BRAKE PEDAL on the 1960 Comet doesn't return completely, check the assist spring in the brake-pedal support bracket. The "pigtail" end of the spring has probably slipped out of the hole provided (shown) to retain spring in the bracket. If this is the case, put the assist spring back in the hole. Using a screwdriver



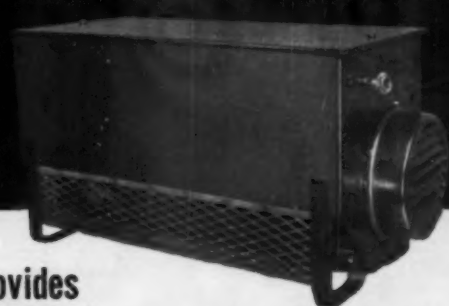
to hold the spring in place, install a retainer clip of the type shown on the end of the "pigtail" that protrudes through the brake support bracket.

After clip is installed, apply the brakes a few times. Then check the clip to be sure it stays in place on the "pigtail."



"That's in memory of a previous shop foreman—TH' OLD CRANK!"

South Wind UNIVERSAL INSTANT HEATER



**provides
complete passenger comfort and
cargo protection in coldest weather!**

● The new South Wind Universal Instant Heater provides the extra heating needed for almost any vehicle . . . safely, economically and efficiently.

This combustion-type air heater is so flexible that it can be installed easily in a wide variety of vehicles. It provides passenger comfort in station wagons, ambulances and crew trucks . . . protects perishable cargos in round-the-town delivery trucks and in cross-country vans and trucks.

Operating independently of the standard heating system, the Universal Heater delivers controlled hot air instantly with a turn of a knob.

Your vehicle heating problem can be solved by South Wind. Write today for complete information.

Check these features of South Wind Combustion Heaters:



Reaches peak capacity
in seconds.



Fully guaranteed by Stewart-Warner, nationally known since 1936 for famous South Wind combustion-type automotive heaters.

**SAFETY
SEALED**

Absolutely safe . . . sealed, stainless steel combustion chamber.



Simple operation . . . just one knob to operate the heater.



South Wind
DIVISION
**STEWART-WARNER
CORPORATION**

1514 Drover Street • Indianapolis 7, Indiana

ENGINEER'S FIELD REPORT



Over-the-road fleet saves three cents per mile with RPM DELO Oil

OK Motor Service Inc. reduced their operating costs for its fleet of 24 highway tractors to only 9½¢ per mile—3 cents per mile less than average for trucking firms in the Chicago area. The reason: RPM DELO Lubricating Oil has extended engine life by 50 to 100% . . . lowered oil consumption and total operating costs.

"We've tried other products," reports Shop Superintendent A. T. Cosentino, ". . . but maintenance records prove RPM DELO Oil gives outstanding per-

formance at the lowest cost per mile.

"Our fleet now averages better than 350,000 miles between overhauls. The life of fuel injection pumps has increased 500% and oil consumption has been reduced from 5.4 to 2.1 qts. per thousand miles. These results add up to real savings."

This inter-state trucking firm operates in Illinois, Wisconsin, and Indiana on a 24-hour day, six days a week. Their Diamond-T and Mack tractors average 110,000 miles per year.

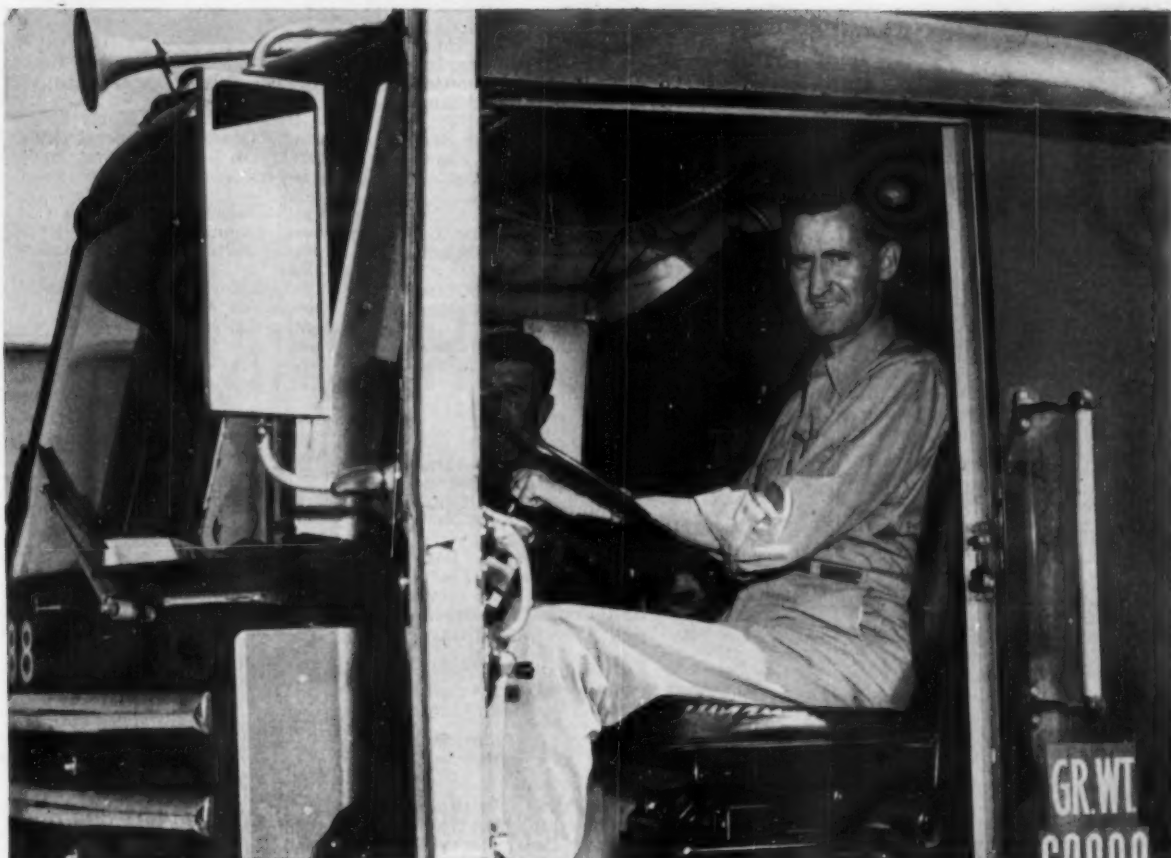
RPM DELO Oil reduces wear and prolongs engine life because it clings to parts whether the engine is running or idle . . . hot or cold. Piston rings stay free because an anti-oxidant fights gum and lacquer formation and a special detergent keeps parts clean. Other additives prevent corrosion of bearing metal and crankcase foaming.

Why not try RPM DELO Oil? Chances are it can cut your costs, lengthen equipment life. Just call your local representative or write any company listed below:



STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 • STANDARD OIL COMPANY OF TEXAS, El Paso
CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey - Denver, Colorado

TRADEMARK "RPM DELO" AND CHEVRON DESIGN REG. U.S. PAT. OFF.



THIS IS RIDING that erases the cost of driver fatigue

With Bostrom's new Viking T-BAR* Suspension Seat you control the major causes of driver fatigue: constant vibration, road shock, back scrub, poor posture seating.

The new Bostrom torsion-bar suspension system thoroughly soaks up these fatigue-causing factors.

Severe shocks caused by extra rough roads are automatically dampened by a new built-in, double-acting shock absorber in the Viking seat.

New contour back and seat cushions give drivers a correct, comfortable position to further eliminate fatigue.

As a result, costs *must* go down. You increase drivers' productive time. You add to their well-being . . . reduce time off and driver turnover. You gain driver appreciation of the company and equipment. All this produces better driver efficiency, lower costs.

*Trade-Mark



Bostrom's new Viking T-BAR Suspension Seat is available for replacement in older trucks, and in new trucks. See your parts distributor or truck dealer.

BOSTROM 25

IN OUR 25TH YEAR

BOSTROM CORPORATION

133 West Oregon Street • Milwaukee 4, Wisconsin



JANUARY

- 9-13—Highway Research Board, National Academy of Sciences, Annual Meeting, Sheraton-Park Hotel, Washington, D. C.
- 9-13—International Congress & Exposition of Automotive Engineering, Society of Automotive Engineers, Cobo Hall, Detroit.
- 17-18—Transportation Assn. of America, Board Meeting & Institute, Chicago.
- 19-21—New Mexico Motor Carriers Assn., Annual Meeting, Albuquerque, N. M.
- 25-26—American Trucking Assn. Executive Committee Meeting, ATA Building, Washington, D. C.
- 28-Feb. 1—National Automobile Dealers Assn., Annual Meeting, San Francisco, Cal.
- 29-Feb. 1—California Trucking Assn., Annual Convention, Hotel del Coronado, Coronado, Cal.
- 29-Feb. 1—Truck-Trailer Manufacturers Assn., Annual Convention, Hollywood Beach Hotel, Hollywood, Fla.

FEBRUARY

- 2-3—Private Truck Council of America, Annual Convention, Sheraton Hotel, Dallas, Texas.
- 5-9—Associated Equipment Distributors, Annual Meeting, Statler & Biltmore Hotels, Los Angeles, Cal.
- 7-9—American Transit Assn., Eastern Regional Meeting, Lord Baltimore Hotel, Baltimore, Md.
- 9—Empire State Highway Transportation Assn., Annual Dinner, Hotel Astor, New York City.

- 9—Internal Combustion Engine Institute, Annual Meeting, Chicago.
- 12-18—American Trucking Assns. Industrial Relations Committee Meeting, Americana Hotel, Miami Beach, Fla.
- 16-19—International Automotive Service Industries, Annual Show, Memorial Coliseum, Los Angeles, Cal.
- 19-25—American Trucking Assn. Industrial Relations Committee Meeting, Americana Hotel, Miami Beach, Fla.
- 22-24—Materials Handling Institute, Pacific Coast Show, Cow Palace, San Francisco, Cal.
- 23-26—Assn. of Diesel Specialists, Annual Convention, Granada Hotel, San Antonio, Texas.

MARCH

- 5-8—American Road Builders Assn., Annual Convention and Materials & Services Exhibit, Chalfonte-Haddon Hall, Atlantic City, N. J.
- 13-16—National Truck Leasing System, Annual Conference, Boca Raton Hotel, Boca Raton, Fla.
- 16-19—Colorado Motor Carriers Assn., Annual Convention, Broadmoor Hotel, Colorado Springs, Colo.
- 22-24—Assn. of Highway Officials (North Atlantic States), Annual Meeting, Hotel Traymore, Atlantic City, N. J.

APRIL

- 9-12—Western Highway Institute, Annual Membership Meeting, Arizona-Biltmore Hotel, Phoenix, Ariz.
- 10-21—American Welding Society and International Institute of Welding, Annual Convention & Welding Exposition, Commodore Hotel (AWS)-Sheraton-Atlantic Hotel (IIW)-Coliseum (Show), New York City.
- 11-14—Middle Atlantic Regional Automotive Show, Exhibition Hall, Philadelphia.

- 13-15—National Truck, Trailer & Equipment Show, Automotive Council of Los Angeles, Great Western Exhibit Center, Los Angeles, Cal.
- 21-22—Pennsylvania Motor Truck Assn., Combined General Membership & Board Meeting, Bellevue-Stratford Hotel, Philadelphia.
- 30-May 2—National Tank Truck Carriers, Annual Convention, Netherlands-Hilton Hotel, Cincinnati, Ohio.
- 30-May 3—American Trucking Assns. Operations Council Meeting, Atlanta, Ga.

MAY

- 8-12—American Gas Assn., Distribution & Production Meeting, Hotel Sheraton, Philadelphia.
- 14-17—Automotive Engine Rebuilders Assn., Annual Convention, Hotel Fountainbleu, Miami Beach Fla.

JUNE

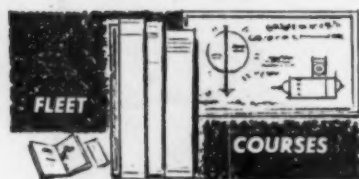
- 4-9—Society of Automotive Engineers, Summer Meeting, Chase-Park Plaza, St. Louis, Mo.
- 25-29—National Accounting & Finance Council, Annual Meeting, Denver-Hilton Hotel, Denver, Colo.

JULY

- 16-19—Truck-Trailer Manufacturers Assn., Summer Meeting, Homestead Hotel, Hot Springs, Va.

AUGUST

- 13-17—Council of Safety Supervisors, American Trucking Assns., Annual Meeting Hotel Fort Shelby, Detroit.
- 13-17—National Truck Rodeo, American Trucking Assns., Cobo Hall, Detroit.



For addresses of sponsoring colleges, see page 308 of the November issue

DRIVER TRAINING

North Carolina State College (4-week courses)—Jan. 30-Feb. 24; Feb. 27-Mar. 24; Mar. 27-Apr. 21; Apr. 24-May 19; May 22-June 16; June 26-July 21; July 31-Aug. 25; Sept. 4-29; Oct. 2-27; Oct. 30-Nov. 24; Nov. 27-Dec. 22.

FLEET SUPERVISOR

University of Alabama—Jan. 23-27.
University of Oklahoma—March.
University of California, Los Angeles (conference)—Mar. 6-7.

University of California, Richmond (conference)—Mar. 16-17.
University of Maryland—Apr. 10-14.
University of Washington—May 1-5.
Northeastern University—May 8-12.
Florida State Dept. of Education, Miami—May 15-19.
Northwestern University—June 12-16.
Penn State University—Sept. 11-15.
Ontario Safety League (Toronto)—Sept. 18-22.

DRIVER TRAINER

Purdue University—Feb. 17-21.
Ontario Safety League (Toronto)—Apr. 24-28.
Penn State University—Oct. 2-6.

FLEET OPERATION

Syracuse University—Feb. 16-Apr. 26.

FLEET MAINTENANCE

University of California, Los Angeles (conference)—Mar. 8-10.

University of California, Richmond (conference)—Mar. 13-15.
University of Washington—Mar. 20-22.
Ontario Safety League (Toronto)—Mar. 20-24.
North Carolina State College—Apr. 10-14.
Penn State University—Apr. 24-28.

TERMINAL MANAGEMENT

Ontario Safety League (Toronto)—Jan. 23-27.
Purdue University—Feb. 21-23.
Penn State University—Apr. 10-14.

TRANSPORT MANAGEMENT

Purdue University—Feb. 21-23.

ACCIDENT INVESTIGATION

Northwestern University—Mar. 13-31; Oct. 23-Nov. 10.

LP GAS TRANSPORT

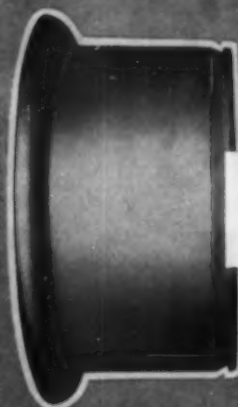
Purdue University—June 21-22.

COMMERCIAL CAR JOURNAL, January, 1961



Best Protection against Rust and Corrosion

Goodyear Rims with
exclusive Bond-a-Coat
finish



This Rim was
protected by
Bond-a-Coat
process

Note condition of rims after standard 48 hour
ASTM salt-spray test. Exclusive Goodyear pro-
cess thoroughly prepares the raw metal surface.



This Rim
was Not

The above pictures clearly show the protective effect of Goodyear's exclusive process—Bond-a-Coat.

This unique finish—originally proved on Goodyear Agricultural Rims—keeps rims from rusting. More than that, it protects tires, too—helps you get maximum mileage out of every tire you buy.

Bond-a-Coat is just one of the reasons why you'll find it pays to specify Goodyear Rims, both for replacement and on new equipment. Some of the others:

Unusual strength: Thanks to special designs and closer tolerances, bal-

ance and alignment are greatly improved. As a result Goodyear's present-day rims are suited for today's needs.

Job-Fitted: Goodyear Rims are job-fitted. Result: less tread cracking, tread wear, reduced sidewall and bead failure.

Special tools: Goodyear provides both hydraulic and hand tools especially made for modern equipment.

Talk it over with your local Goodyear Rim Distributor. He'll help you pick out the type and size of rim best suited to your needs. Or write:

Goodyear, Metal Products Division,
Akron 16, Ohio.



This is how Goodyear stores its rims—
outdoors—thanks to Bond-a-Coat.

Your tires go farther on RIMS by

GOODYEAR

MORE TONS ARE CARRIED ON GOODYEAR RIMS THAN ON ANY OTHER KIND

Save on multi-stop routes with new '61 FORD PARCELS

SAVE ON BODY INSTALLATION...IT'S SIMPLER WITH A FORD WINDSHIELD-FRONT-END OR STRIPPED-CHASSIS

Fleet operators requiring units with "special" delivery bodies are finding that the combination of a Ford Parcel Delivery chassis and a customized body from one of the industry's major body manufacturers is one of the best ways to beat rising costs.

The Ford Parcel Delivery line for 1961 brings more and bigger savings to a greater number of operations with a complete range of models from 4,000-lb. to 15,000-lb. GVW. The new P-100 stripped-chassis model is an unmatched economy unit for lightweight, bulky, stop-go loads. For longer routes and heavier payloads, the P-350, 400 and 500 Series with windshield-front-end or stripped-chassis models are recommended. Ford also offers larger models in the P-600 Series (available on special order) for GVW's up to 18,500 lb.

Ford's P-Series models with windshield-front-end have a mounting flange at the top which makes it easier to attach a custom body roof. They also include a straight door pillar to facilitate door fitting. All controls and instruments are located within easy reach and view of driver, and tilt-forward seat provides generous aisle space.

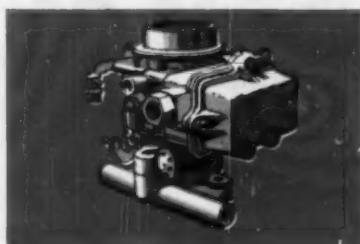
Most of the leading parcel delivery body manufacturers also offer custom bodies designed specifically for Ford's stripped-chassis units. Available in six different wheelbases, these chassis models come with a complete package of electrical instruments, controls and equipment which further simplifies the body installation. Your Ford Dealer will gladly work with any equipment manufacturer to help you meet your parcel delivery needs.





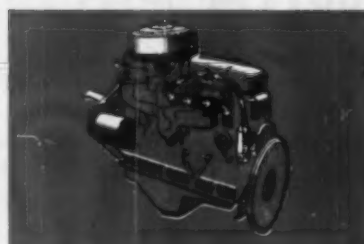
SAVE WITH HD CRUISE-O-MATIC

Optional on P-350 through P-500 models, this transmission automatically provides correct application of power for all driving conditions and helps cut maintenance costs. Saves time and effort, too—gives the right "go" for every driving range.



SAVE WITH ECONOMY CARBURETOR

Ford now offers an optional carburetor for the standard 223 Six engine that gives greatly improved gasoline mileage for stop-go operations. This economy carburetor reduces fuel consumption at idle speeds and still provides proper fuel mixtures for good acceleration.



SAVE WITH POSITIVE CRANKCASE VENTILATION

Positive Crankcase Ventilation, standard on both the 223 Six and 292 V-8, is designed to provide proper ventilation whether vehicle is standing or moving. It cuts engine corrosion and oil contamination for greater engine durability and extended oil life.

EXTRA-VALUE FORD PARCEL CHASSIS FEATURES

- **HYDRAULIC ACTUATED CLUTCH** . . . HD 11-inch clutch is standard on P-350 through P-500; 10-inch clutch furnished on P-100. Hydraulic actuation reduces driver fatigue, prolongs clutch life.
- **LARGE COOLING CAPACITY** . . . High capacity "Flat Tube-and-Fin" type radiator provides for better engine cooling. Especially important for congested city work.
- **ORSCHELN PARKING BRAKE LEVER** . . . Standard on P-500, optional on P-100 through P-400. Permits easy inside adjustment of parking brake linkage.
- **AUXILIARY REAR SPRINGS** . . . Optional on P-400 and P-500 Series. Provide for extra capacity when the loads or road conditions are severe, and still allow a smooth ride under normal conditions or light loads.
- **WIDE-TREAD FRONT AXLES** . . . Provide greater front end stability, shorter turning diameter and unmatched maneuverability.
- **DOUBLE-ACTING SHOCK ABSORBERS** . . . Standard on P-100 through P-400 Series, and optional on P-500, provide smooth, level ride control.
- **STRAIGHT-LINE DRIVE** . . . Large tubular shafts and needle bearing universal joints are installed with minimum shaft angles for smooth power flow. Rubber-encased center bearing with neoprene seals is used on longer wheelbases.

NEWS OF MORE SAVINGS FOR CITY DELIVERY OPERATORS . . . ►

Save on city delivery and shuttle costs with '61 FORD TRUCKS

NEW POWER AND DURABILITY WITH PROVEN 332 HEAVY DUTY V-8

Ford's 750 Series tilt-cab and conventional models provide the versatility, payloads, hauling power and economy to make them exceptional city delivery and shuttle tractors. New power and chassis improvements make possible a big increase in maximum GCW . . . from 42,000 lb. to 50,000 lb.

The improved 200-hp 332 Heavy Duty V-8 is now standard for greater performance, proven durability and low operating costs. Stress-relieved cylinder heads, 4-ring aluminum alloy pistons, sodium-cooled exhaust valves and tungsten-cobalt alloy exhaust valve seat inserts are typical of the heavy-duty features to be found on this engine for greater durability.

Ford F-Series models now have a 102-inch bumper-to-back-of-cab dimension, with front axle set only 28 inches from bumper. This permits longer trailers within given over-all

length and bigger payloads—especially in "bridge formula" states. The new independent mounting system for cab and radiator separates both from adjacent sheet metal assemblies for greater durability. And radius rod-leaf type rear springs provide better axle alignment and longer spring life. The electrical wiring system has been improved for greater reliability. Chassis wiring is fastened within the frame web, away from mud, ice and snow.

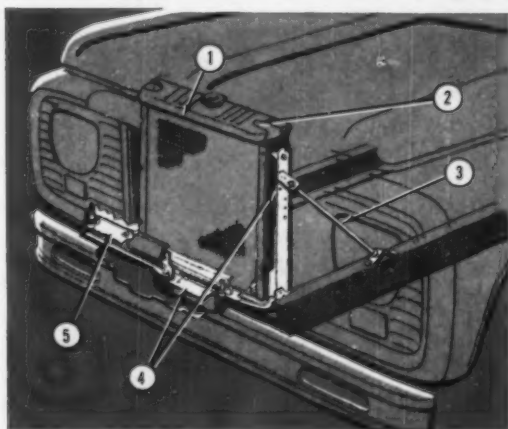
Ford C-Series tilt-cab design distributes more weight to the set-back front axle to increase payloads as much as 1,000 pounds. And fine maneuverability makes these units popular for congested traffic city runs.

These units add greater flexibility to your operation because they can "pinch-hit" as line-haul tractors with their new maximum GCW of 50,000 lb.

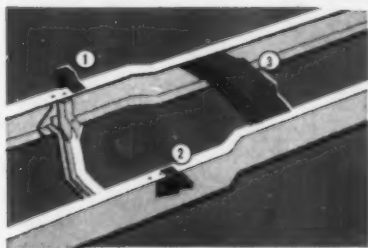




SAVE WITH NEW HEAVY-DUTY CONSTRUCTION THAT DOUBLES CAB, SHEET METAL AND RADIATOR LIFE

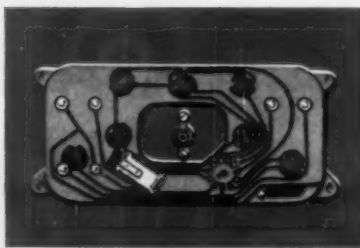


- ① **Ford's exclusive "lock-seam" radiator construction** doubles the solder area at key seams for greatly increased strength and longer radiator life.
- ② **42% heavier-gauge sheet metal** in fenders, hood, cab floor pan and toeboard gives greater strength and durability. Heavier-gauge metal on radiator tanks and header provides more strength, greater resistance to vibration, jolts and corrosion.
- ③ **Independent radiator mountings**, separate from front end sheet metal, mean that road shocks and shakes are not transmitted to the radiator through sheet metal. Tanks, tubes and connections last longer, require less maintenance.
- ④ **"Horse collar" mounting**, seated on resilient rubber at the center of frame cross member, soaks up any frame flexing . . . cuts wear and tear on entire cooling system.
- ⑤ **Fender mountings**, independent of both cab and radiator, eliminate stress transfers for greatly increased fender life. And only 8 bolts per fender allow easy removal for rapid service accessibility to engine area.



**SAVE WITH
NEW 3-POINT CAB MOUNTING**

Two outboard front mounts plus a centered "twin" rear mount provide a triangular system that holds the cab stationary while allowing the frame to move independently. This reduces strains for greater cab durability.



**SAVE WITH PRINTED
ELECTRICAL CIRCUITS**

Ford's printed wiring circuit is standard on all Tilt Cab models. This system, designed for long life, eliminates the "under dash" tangle of wires, minimizes shorts and is color-coded to provide for easier repairs.



**SAVE WITH
NEW ACCESSIBILITY**

New Parallel Action wipers clear a bigger windshield area. And convenient access panels to the wiper motors cut service time and expense. These dependable wipers are available on all Tilt Cab models.

NEWS OF MORE SAVINGS FOR OVER-THE-ROAD HAULERS . . . ►

Save on the long hauls with new '61 FORD TRUCKS

SAVE WITH HD-SERIES TRACTORS FOR PROVEN DIESEL POWER AND ECONOMY

The new Ford HD-Series tractors provide a 28-inch bumper-to-axle dimension that permits maximum legal loads in most "bridge formula" states. And their compact 82-inch BBC gives the dimensions to handle longer high-cube trailers.

And for greater payloads within their 76,800-lb. maximum GCW weight class, strong lightweight components are used throughout where consistent with maximum durability. Extra-hi-tensile single-channel steel frames, fiberglass cab skirts, aluminum steering gear housing, and optional aluminum suspension components, disc wheels, transmission cases and fuel tanks are typical examples of Ford's weight-saving design.

Ford HD-Series tilt-cab tractors are offered with five proven Cummins diesel engines for maximum

economy and durability. They are the 672-cu. in. NH-180 and NH-195 or the 743-cu. in. NH-220, NHE-180 and NHE-195. And you get a wide choice of industry-accepted power train components to "custom tailor" these tractors to your special requirements. The Ford H-Series provides these components in a "maintenance-engineered" chassis for easier service and lower running costs.

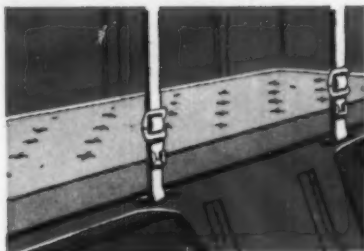
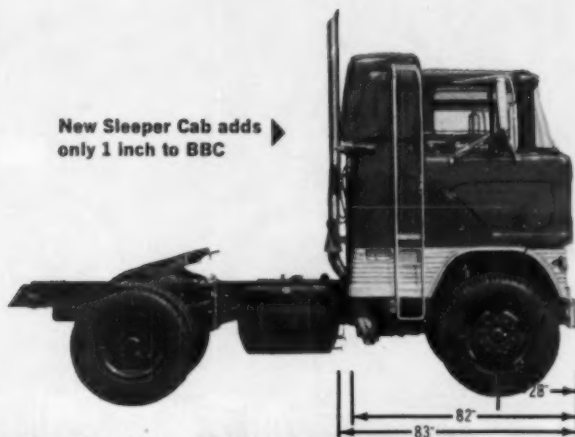
HDT-Series tandem tractors, both dual drive and pusher types, are available with a tremendous choice of power train options including a belt drive installation to transmit power from the driving to dead axle on the pusher-type tandem models. And Ford's durable Super Duty V-8's are ready with new economy for those desiring gasoline power in all H- and HT-Series tractors.



Look for this sign at Ford Dealers' across the country for parts and service on all Ford gas and diesel trucks!

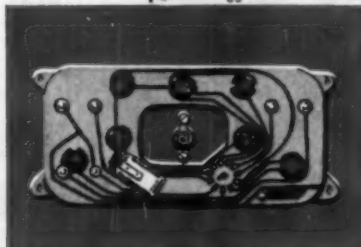


New Sleeper Cab adds
only 1 inch to BBC



SAVE WITH NEW SLEEPER CAB

Strong, lightweight fiberglass sleeper compartment has over 7 feet of stretch-out length. Optional on all H-Series models, this spacious sleeper adds only 25 pounds to cab weight; 1' to cab length for a total of only 83" BBC.



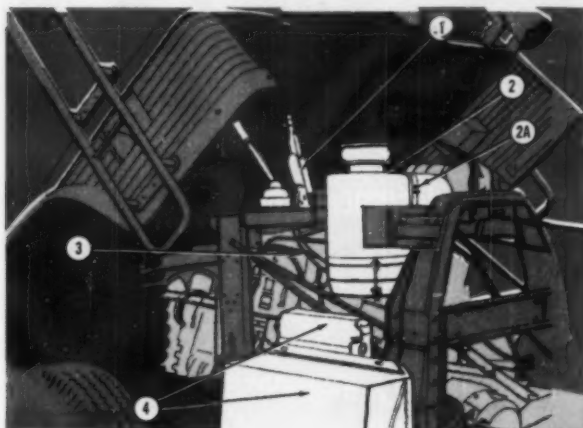
SAVE WITH PRINTED ELECTRICAL CIRCUITS

Ford's printed wiring circuit is standard on all H-Series models. This system, designed for long life, eliminates the "under dash" tangle of wires, minimizes shorts and is color-coded to provide for easier repairs.



SAVE WITH NEW ACCESSIBILITY

New Parallel Action wipers clear a bigger windshield vantage area. And convenient access panels to the wiper motors cut service time and expense. These dependable air-operated wipers are standard on all H-Series models.



SAVE WITH FORD'S EASY-MAINTENANCE DESIGN

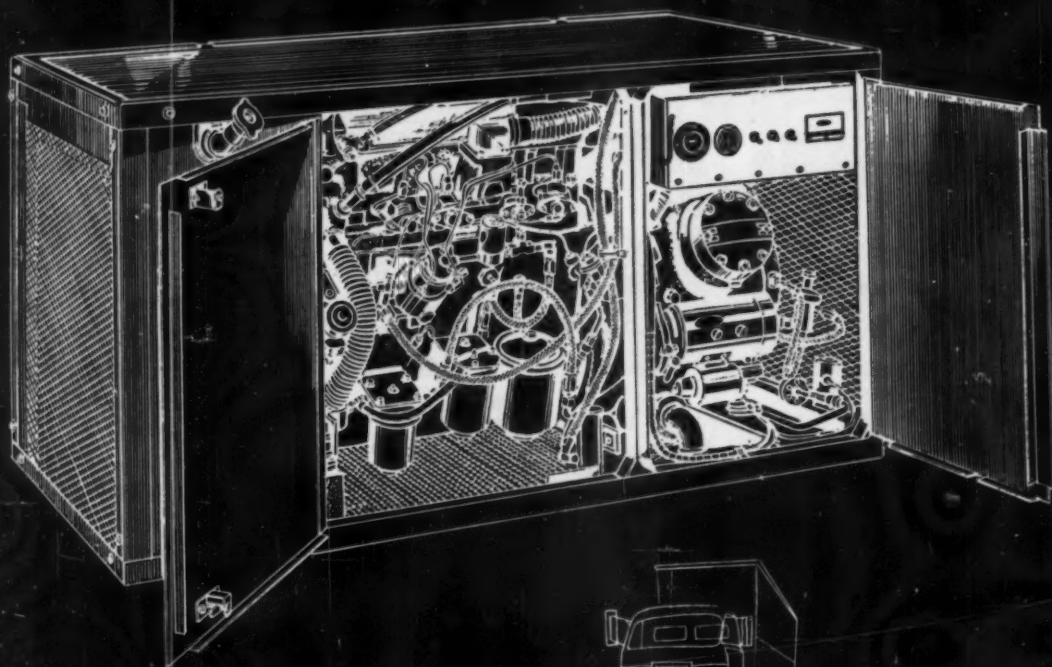
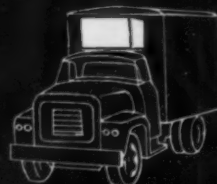
- ① **Stationary control tower** carries the positive-action transmission and parking brake levers that do not tilt with the cab. This means transmission and brake linkage is simple and easily maintained.
- ② **Air cleaner** is protected under the cab, and draws in cool outside air through cab ducts. Its location allows air to follow a direct path to engine. **2A.** There's only one short hose connection, so multiple-connection maintenance problems are avoided.
- ③ **Complete accessibility** to key maintenance items is provided when cab is tilted. Diesel injectors, fuel pump, air cleaner, oil filler cap, etc., are all on the engine's exposed left side and above the frame rail for easier servicing.
- ④ **Battery and series-parallel controls** (for 24-volt starting) are well protected and accessible. The two HD 12-volt batteries are securely mounted, and can be readily reached for servicing.

FORD TRUCKS COST LESS

YOUR FORD DEALER'S "CERTIFIED ECONOMY BOOK" PROVES IT FOR SURE...

FORD DIVISION, *Ford Motor Company*





TropicAire, the first all-American designed and built diesel-powered trailer refrigeration unit, continues to hold a wide margin of leadership in performance, dependability, capacity and ease of service.

If you haven't had the most recent facts on reefer advancements for 1961, inquire now!



McGraw-Edison Company, Transportation Cooling Division,
5201 W. 65th St., Chicago 38, Ill.





FLEET HIGHLIGHTS AS REPORTED BY COMMERCIAL CAR JOURNAL • JANUARY 1961

1961: How does the new year look?

As of the middle of December, businessmen began to think better of 1961 than they had earlier. Indications were that the predicted "sag" for the first six months might only be a slight downward "bulge" . . . with the expected mid-year upswing possibly coming a little earlier. For the thinking behind this optimism, see page 5, this issue.

Highway tax debate likely to be a hot, long fight

Shakedown cruise for the new Congress will soon be over. Serious business will be the order of the day . . . and one of the first important items will affect the highway-use taxes you pay. It's the question of "Who pays how much for what size highway?" Even before the debate starts there's a possibility that a reasonable answer will not be reached until 1962. American Assn. of State Highway Officials decided at its recent annual meeting that six more months study was needed to study the relationship between truck sizes and weights and road wear based on data gathered at the AASHO Road Test. AASHO's Executive Committee suggested to the Bureau of Public Roads that its studies on the same subject be delayed so AASHO and BPR findings can be coordinated. Prediction: Lots of hot argument inside and outside of Congress but nothing conclusive until AASHO Road Test findings are in. Meanwhile . . .

ATA announces its views on Interstate Highway sizes and weights

American Trucking Assns. went on record last month as asking for a weight limit of 24,000 lb on single axles and 40,000 lb on tandems for highways in the Interstate System. Until these highways all meet new construction standards, the Association suggested "interim" limits of 22,400 lb for single and 36,000 lb for tandem axles. Recommended width is 108 in. (with 102 in. in the "interim") and height would be 15 ft (with 13½ ft in the "interim"). Overall lengths asked for (with "interim" limits shown in parenthesis) are: 2-axle straight truck—40 ft (35), 3-axle straight truck—45 ft (40), tractor and semi-trailer combinations—60 ft (60), other combinations—65 ft (65).

Trust fund takes in more than it spends for highways, but . . .

Up to the end of October, the Highway Trust Fund had taken-in \$9.5 billion in highway user taxes since July 1956 when the highway building program first got underway. Outgo during the same period for highways totaled \$9.1 billion . . . not quite a ½-billion less than income. But, says Federal Highway Administrator Bertram D. Tallamy, present revenues are not sufficient to pay for future expanded highway building necessary

to keep the program on schedule. His estimate is that without more money, the "finish line" will be delayed four years—from 1972 to 1976. There's not much support for the stretchout approach, so you can expect highway-use taxes to be boosted. Only questions will be (as noted above): Who pays . . . how much . . . for what?

Highway prediction: No boost in costs, more revenue to meet costs

At the AASHO meeting, retiring president D. H. Stevens expressed the opinion that the estimated cost to complete the highway program "... will not vary to any great extent from that previously filed in 1958." He noted the need for revenue to meet this price tag, said most "... will be derived from highway-user taxation." He also termed it a fair assumption that attempts "to obtain a part of the funds necessary . . . from non-users" will be "somewhat successful."

Congress can also be expected to

There'll be lots of other-than-highway legislation in Congress affecting fleet operations. You can look for . . . a campaign to permit rail ownership of truck lines . . . a push for a centralized transportation regulatory agency and more federal control . . . a proposal (by Representative Wright Patman of Texas) for more depreciation allowance on capital equipment and a shorter depreciation period . . . a recommendation for federal registration of all (for-hire, exempt and private carrier) trucks over 26,000 lb GVW . . . suggestion that private carriers not be allowed to transport exempt agricultural commodities . . . more federal interest in highway safety . . . an effort to revise present piggy-back ground rules . . . further rail demands for more rate freedom, especially "agreed rates" . . . efforts to bring motor carriers under the minimum wage law.

Fleet groups oppose mileage and hour safety reg changes

Both American Trucking Assns. and Private Truck Council have filed objections to ICC's proposed changes in driver hours of service and daily mileage limits (June '58, page 186 and Aug. '60, page 33). They say the 375-mile daily limit does not reflect the safe capabilities of modern vehicles. Other proposals to put drivers "out of service," restrict on-duty time, reduce emergency driving leeway are also protested. Changes would hamper efficient fleet operation without an equivalent gain in safety, say the two Associations.

Agreement nears on container size standards

Tentative OK for container lengths was given last month. Proposed lengths are 10, 20, 30 and 40 ft. Actual lengths (with tolerances) will be 9 ft, 9¾ in. (—3/16 in.), 19 ft, 19½ in. (—3/8 in.), 29 ft, 29½ in. (—3/8 in.) and 40 ft (—3/8 in.). Height and width (with tolerances) are suggested at 8 ft wide (—3/16 in.) and 8 ft high (—3/8 in.). Still a problem: Standardized corner castings and stacking devices.

Drop in motor carrier revenues blamed on competition

Third quarter reports on the top 10 motor carriers (see page 177, this issue) reflect a drop in revenues. Reason given: Increased competition for the transportation dollar. ATA's Research Dept. reports 1960 truck tonnage for the first nine months a slim 0.6 per cent ahead of 1959.

In thousands of units, except bus sales are in actual numbers	New Truck Registrations		Truck Factory Sales—Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic		Truck and Bus Tires			
									Replacement Shipments		Original Equip. Shipments	
	Oct.	10 Months	Oct.	10 Months	Oct.	10 Months	Oct.	10 Months	Oct.	10 Months	Oct.	10 Months
1960	74.2	802.8	60.6	820.7	4.0	55.2	396	3348	938.4	8048.8	247.2	3387.3
1959	78.8	801.1	81.7	839.7	5.5	66.1	266	1850	1151.2	8538.8	336.2	3943.5

Truck and Bus Production					Truck tonnage		
Make	Weeks Ending		Year to Date		1960 Week Ending	% Change from Previous Week	% Change from a Year Ago
	Dec. 10	Dec. 3	1960	1959			
Chevrolet	7,348	7,437	374,947	308,860	December 10	- 0.1	- 5.1
G. M. C.	1,351	1,380	98,953	71,478	December 3	+18.2	- 5.5
Diamond T	17	33	2,403	5,215	November 26	-17.5	- 5.6
Dodge	80	80	3,448	3,804	November 19	+ 4.0	- 2.2
Dodge and Fargo	837	1,403	67,369	67,377	November 12	- 8.4	- 6.8
Ford	8,772	8,635	316,599	316,675	November 5	+ 0.9	+ 1.3
F. W. D.	11	10	633	1,014	October 29	- 1.6	- 4.1
International	1,910	1,826	114,825	137,277	October 22	- 0.2	- 1.5
Mack	206	263	13,884	18,363	October 15	- 3.7	- 1.4
Studebaker	24	199	12,066	10,697	October 8	- 1.6	+ 6.7
White	319	261	18,061	18,957	October 1	+ 2.2	- 1.0
Willys	1,646	1,776	118,374	108,880	September 24	- 0.5	- 2.1
Other Trucks	70	70	4,125	3,741	September 17	+18.1	- 1.1
Total—Trucks	22,571	23,113	1,142,809	1,066,436	September 10	-14.8	+ 0.4
Buses	80	75	3,925	2,427	September 3	+ 6.8	+ 0.4
Total—Trucks and Buses	22,651	23,188	1,146,814	1,068,863	August 27	+ 1.6	- 2.9
					August 20	+ 1.4	- 3.0
					August 13	- 1.3	- 3.6
					August 6	- 0.3	- 1.7
					July 30	+ 1.4	- 2.4

Sources: Truck and bus data—Automobile Manufacturers Assn. Tonnage—American Trucking Assn. Registrations—R. L. Polk & Co. Trailers—Dept. of Commerce. Tires—Rubber Manufacturers Assn.

Tires: Price cuts and more nylon cord

Early last month, Goodyear dropped prices about 7½ per cent on truck tires with from 8.25 through 11.00 cross-section to bring "published prices more in line with actual selling prices." . . . At the same time, Firestone and U. S. Rubber reduced passenger car tire prices \$1 to \$4, added to the present "materials and workmanship" guarantee a new 12 to 30-month "time-service" guarantee. . . . American Enka Corp. is expanding nylon tire cord producing facilities by 70 per cent. . . . Chemstrand Corp. says it has a new nylon tire cord with improved fatigue resistance.

Fleets may get uniform filing forms during 1961

National Assn. of Railroad and Utilities Commissioners met last month, said it would give special attention and emphasis to motor carrier regulatory problems during 1961. Specific proposals call for adoption of three uniform forms for filing with state regulatory agencies: (1) operating authority, (2) insurance coverage and (3) vehicle registration.



A QUICK LOOK AT WHAT'S COMING TO HELP WITH YOUR ADVANCE FLEET PLANNING

PTC schedules second Fleet Maintenance Exposition

Encouraged by the success of its first Fleet Maintenance Exposition (held early last month in New York City), Private Truck Council has scheduled the second annual version for Oct. 23-25, this year. The place: New York City's Coliseum. Some 200 fleetmen were on hand to hear Ernie Cox (ICC motor carrier safety chief) keynote the first show's opening. By the time the show closed, some 449 fleet managers had paid registration fees for attendance at the seminars and workshop sessions. These and several hundred more had made the rounds of exhibits by some 62 fleet suppliers. Show officials kept tabs on reaction of both fleetmen and suppliers, found a majority of both groups felt the show decidedly worthwhile. Prediction: An even bigger and better show this Fall.

Tri-State College sets new research and development fund

A Motor Transportation Research and Development Fund has been established at Tri-State College, Angola, Ind. J. Robert Cooper, president of Red Star Transit Co., Detroit, is chairman. One of the fund's first objectives will be to establish a transportation research library.

Mark your calendar for several big ones

End of this month (Jan. 29-Feb. 1) Truck-Trailer Manufacturers Assn. holds its annual convention at the Hollywood Beach Hotel, Hollywood, Fla. It's followed closely by Private Truck Council of America's annual meeting—Feb. 2-3, Sheraton Hotel, Dallas, Texas. Its theme: Cutting costs through practical controls. Soon after, Feb. 7-9, American Transit Assn.'s eastern regional meeting will be held in Baltimore, Md., at the Lord Baltimore Hotel. Later in February (16-19), the west coast plays host to the International Automotive Industries Show (IASI) in the Rodger Young Auditorium, Los Angeles, Cal. Originally scheduled for these dates was the annual meeting of the Assn. of Diesel Specialists. This group now meets Feb. 23-26, Granada Hotel, San Antonio, Texas.

IN THIS ISSUE

There's a brief preview of some of the timely reports coming your way during 1961 . . . plus a description of CCJ's brand new "Golden Anniversary" mobile editorial office, beginning on page 98. Following this, Michigan's Darling Freight lines details its PM program and tells how it's controlled. See page 102. Next comes Sun Oil's Fred Hague from Philadelphia to tell why and what PM is necessary before a new truck goes into service, starting on page 104. Then Florida's "Jack Rabbit" fleet describes how it gets safe operation without regular safety meetings. You'll find this on page 107. Last feature in this 13-page special section opens on page 109 with the title "Longest dam haul on record."

From 1/2 ton to 60-ton
General Motors leads the way!

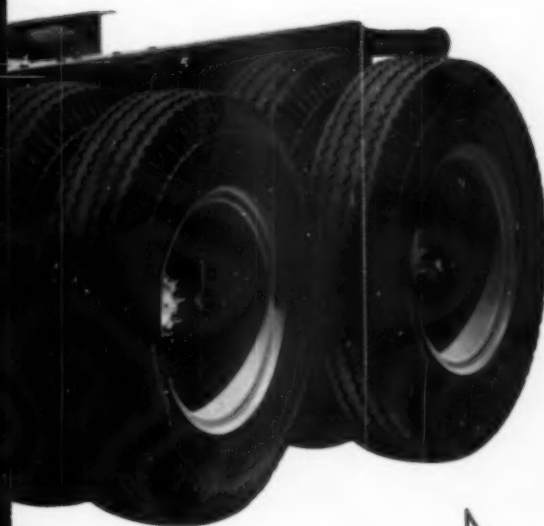


EXCLUSIVE V-6 POWER



Another
**TRUCK TRIUMPH
OF THE 60's!**

**NOW FROM
GMC NEW,
LOW-COST
6-WHEELERS!**



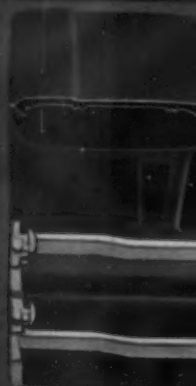
TEAR OUT AND SAVE

From 1/2 ton to 60-ton
General Motors leads the way!

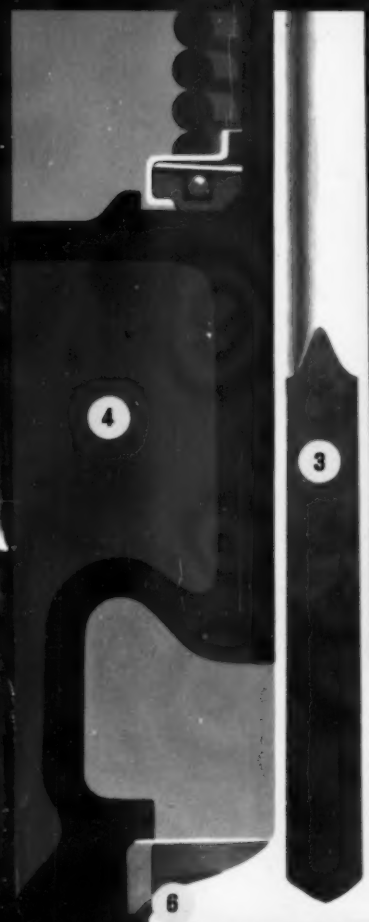


EXCLUSIVE V-6 POWER

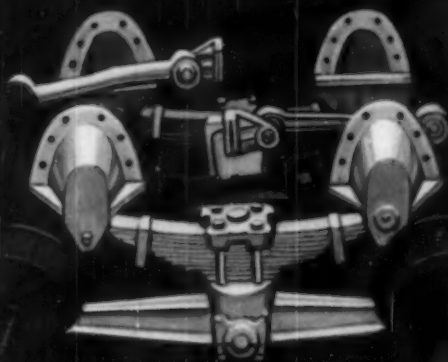
ONLY GMC



Cabs Have Double-Walls For
cabs have 2-layer construction on the
for needed durability, more protection.
Extra-strong sills and twin-support rails
anchor the cab. Door sag and rattles are
duty hinges and double dovetails.
steel-rimmed door windows and 4-co-

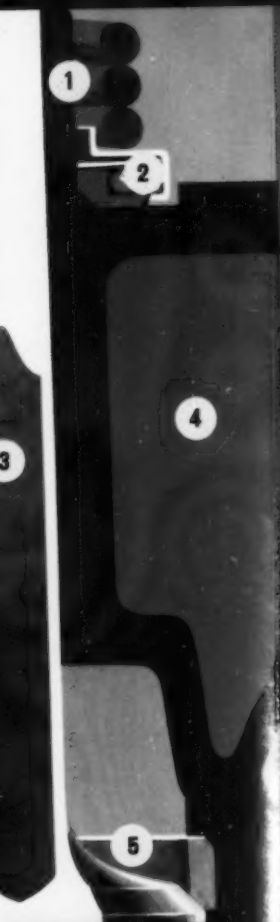


Longer-Life!—GMC
in the roof and back panel
protection and insulation.
rt reinforcements securely
ies are checked by heavy-
tails. Foam-rubber seat,
4-coat finish are standard.



Lightweight, Low-Maintenance Tandems!—With this GMC suspension you have less truck weight, carry bonus payloads. Equalizing beam guarantees equal load on each axle at all times. Rubber mounts and bushings at all wear points eliminate lubrication, minimize service. Short, lightweight springs only support the load. Torque rods transmit all driving and braking forces. Inter axle differential lock is standard equipment.

GMC V-6 ENGINES GIVE YOU ALL THESE LIFE-EXTENDING, PROFIT-PRODUCING ADVANTAGES!



Cooler-Running, Stronger, Bigger Valves . . . Everything For Longer Life!

- 1 Extra-long valve guides, integral with head, minimize stem exposure to burning gases and assure faster transfer of heat.
- 2 Positive valve rotators (both intake and exhaust) give valves self-cleaning action to prevent sticking, pitting, warping, leaking and burning.
- 3 Valve stems are short and big diameter to practically eliminate distortion. Sodium-filled exhaust valves more rapidly transmit damaging heat through the valve guides to the coolant.
- 4 Up to 176 gallons of coolant circulating every minute (over twice as much as many competitive engines) provide the flow necessary for life-prolonging heat transfer.
- 5 Hard, tough, special steel is used in the exhaust valve seat inserts to withstand high temperatures and constant seating action.
- 6 Valve heads and ports are extremely large for better breathing. Special hard facing resists pitting, corrosion, fatigue and wear. Wide bridge between valves provides added strength and big cooling areas for better heat dissipation. No two exhaust valves are adjacent. This eliminates destructive "hot spots."

Heavy-duty GMC V-6 engines are designed to give you up to 200,000 miles of continuous operation without a major overhaul, with normal use and care.

Useable power is produced over an extended, low rpm range for higher performance and lower fuel costs.

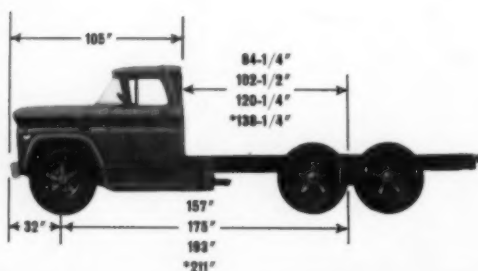
Compact block has staggered cylinders and 3-inch drop skirt for more strength and rigidity.

Big-diameter, Meralco M400 bearings last longer than others.

Short, stiff, Temco-hardened V-6 crankshafts weigh twice as much as those in comparable V-8s . . . are stronger, more rigid.

LOW-PRICE . . . HIGH-PERFORMANCE . . . EASY-IN EASY-SERVICE TRUCKS!

Now when you want to haul, you get added traction and flotation—it's yours at modest cost with 105" BBC Conventional Six-Wheelers. Exclusive, extended wheelbases are standard. Cab floor is low to the ground to save time getting in and out. Wide, full-opening hood and spacious engine compartment make servicing simple and convenient. Seeing is believing. Your GMC Dealer, listed in the Yellow Pages, will gladly show you all the features of these new six-wheelers. Contact him today.



*W5500 only



Y-IN-AND-OUT...

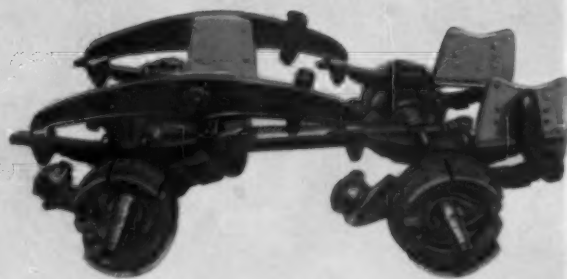
haul extra payload,
 st with the new GMC
 ded-life V-6 engines
 me and effort when
 engine compartment
 ving. And your GMC
 all the outstanding

QUICK FACTS—CONVENTIONAL SIX-WHEELERS		
SERIES	W5000	W5500
GVW	35,000-37,000 lbs.	43,000-48,000 lbs.
GCW	50,000 lbs.	60,000 lbs.
AXLES—FRONT	7,000-9,000 lbs.	9,000-15,000 lbs.
REAR	28,000 lbs.	34,000 lbs.
BRAKES—HYDRAULIC	953 sq. in.	—
FULL AIR	943 sq. in.	1100 sq. in.
ENGINE—V-6 GAS	351 cu. in. 180 hp. 401 cu. in. 210 hp.	401 cu. in. 210 hp. —
TRANSMISSION	5-speed direct 3-speed aux.	5-speed direct 3-speed aux.
WHEEL & TIRES	cast spoke, 8.25/20-10 10-stud Budd, 10.00/20-12	cast spoke, 9.00/20-10 10-stud Budd, 11.00/22-12

▲ = Optional



ALL NEW GMC 6-WHEELER



More "Paying" Pounds With Less "Dead" Weight!—GMC's lightweight pusher tandem is the most economical way to increase the proportion of payload to GVW. With the rocker arm and torque rod design, there's equal load on each rear axle with dual tires . . . $\frac{1}{2}$ - $\frac{1}{2}$ load with single tire pusher. Cam action of free floating springs gives a smoother ride, empty and loaded.



More Power Per Dollar!
More Power Per Cu. In.!
More Power Per Pound!

GMC V-6 and V-8 Diesels.—New GMC diesels are hundreds of pounds lighter . . . several inches shorter and less expensive to operate than other diesels in their class. Two-cycle design gives you power on every down stroke, twice as often as four-cycle design. Smoother, more responsive power permits you to maintain the tightest schedules day after day, year after year. Max. torque—577 to 805 lbs.-ft. Max. horsepower 189 to 290.



PROFIT-PERFORMANCE ON EVERY HAUL		
MODEL	GROSS TORQUE RANGE	MAX. HORSEPOWER
702	625-630 @ 1400-2100	275 @ 2400

Most "GO" On The Road!

Exclusive GMC Twin-Six—Save road time, cut gear shifting up to 60% with the most powerful gas engine offered as standard equipment. This great load-moving power produced at low-stress, easy-stroking rpm, also adds to engine life and cuts operating costs.

● Stronger, wider-track front axles for greater stability and shorter turns ● New-design, stronger frame can withstand extreme shock loads, hardest and most grueling service ● Easy-shifting, high-torque capacity transmissions for the most particular buyer and most unusual application ● Cabs have plenty of room inside . . . tough, reinforced construction outside.

ERS BATTLE OPERATING COSTS

lead"
tan-
rease
With
sign,
with
e tire
rings
ded.

s are
ches
than
sign
ce as
more-
n the
after
Max.

r-
d

ames
rque-
lenty



1

WITH BIG, NEW ADVANCES ACROSS-THE-BOARD!

Tilts at a Touch!

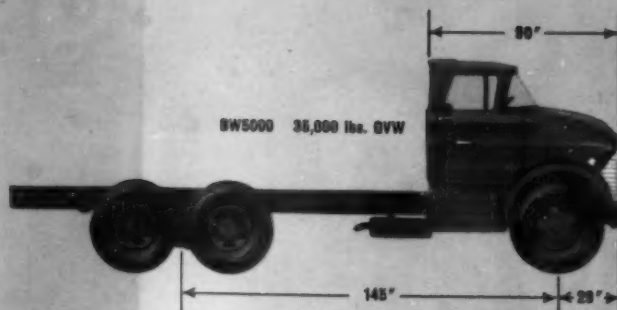
Tilting is an easy, one-man job with counter-balanced cab and trouble-free torsion bar spring. Engine is completely exposed.

Stationary control island assures permanent positioning of controls for proper operation. Big-payload tilt-cab

six-wheelers with 72" BBC and 52" set-back front axle cover the range from 37,000 lbs.

GVW to 76,800 lbs. GCW. LW7000

shown with exclusive Twin-Six.



Big Span for Big Savings!

GMC's full line of Conventional 90" BBC six-wheelers will completely match all your exact hauling requirements with full-range versatility in sizes, performance, gearing and strength. Whatever you need to cut job time and reduce operating costs you can get from GMC.



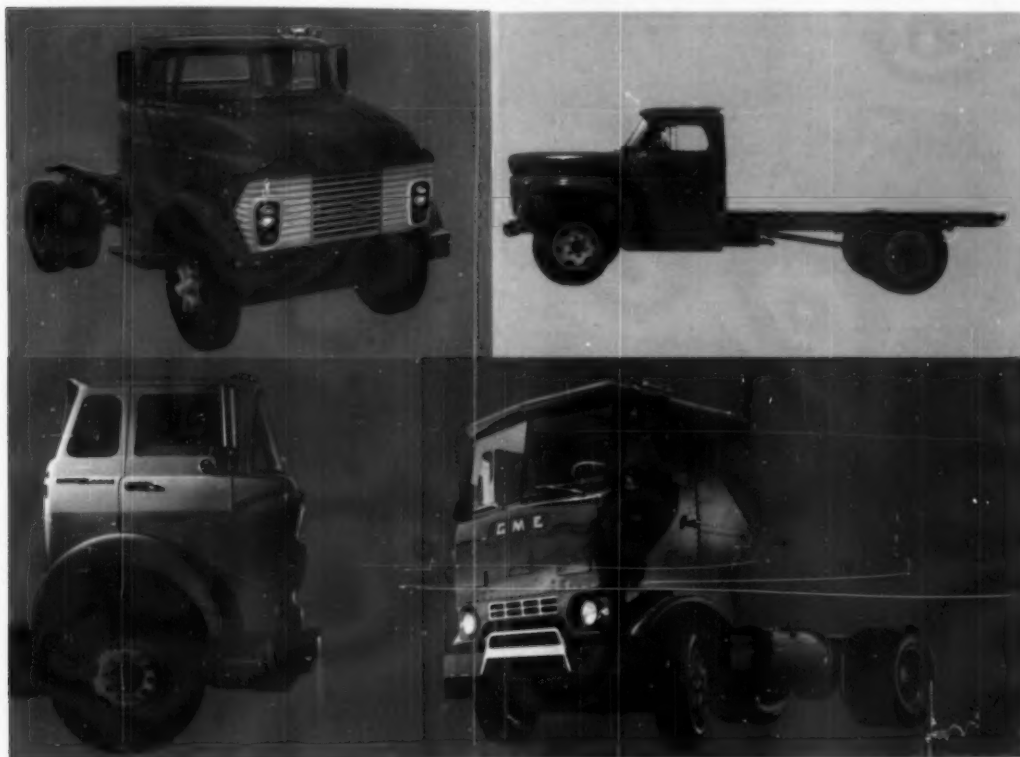
Short On Dimensions . . . Long On Endurance . . . Big On Payloads!

GMC builds the only trucks that combine lightweight 48" aluminum tilt-cabs with proved, high-performance V-8 diesel power and big-payload pusher tandems. DFW7100 Series shown. Other 48" BBC six-wheelers with 28" front axle placement for all hauling jobs from 36,000 lbs. GVW to 76,800 lbs. GCW.

YOU'LL ALWAYS FIND THE BEST TRUCK FOR ANY JOB AT YOUR GMC DEALER!

B6000 30,000 lbs. GVW to 55,000 lbs. GCW.—Most adaptable for legal loads at lowest cost with 90" BBC . . . haul 40-foot trailers in 50-foot over-all.

A5000 24,000 lbs. GVW to 45,000 lbs. GCW.—Only GMC Trucks give you all the advantages of extended-life V-6 engines and easy-riding, easy-driving independent front suspension.



L7000 32,000 lbs. GVW to 76,800 lbs. GCW.—Get the highest performance of any gas-powered tilt-cab on the road with exclusive GMC Twin-Six.

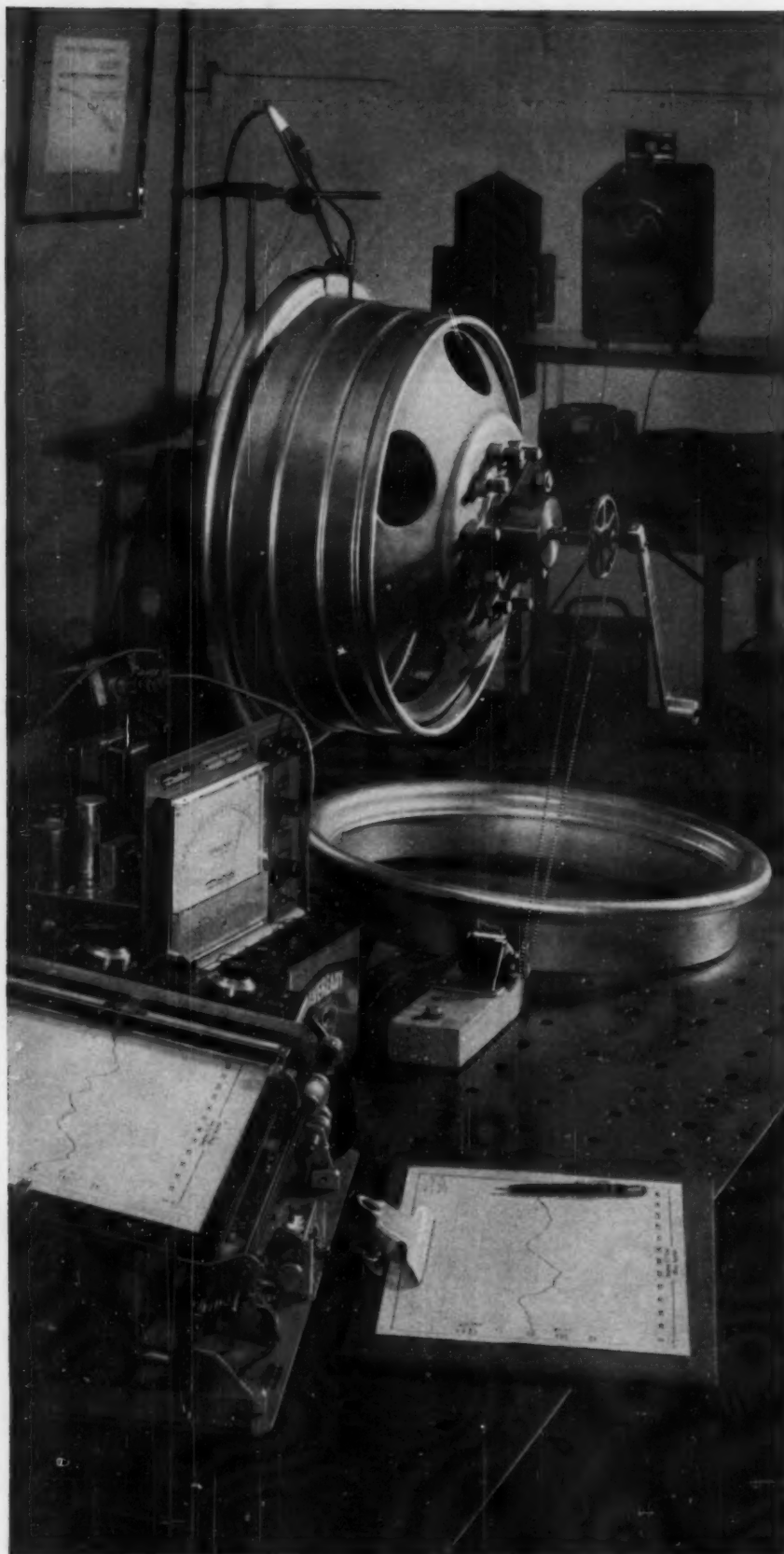
DF7000 60,000-76,000 lbs. GCW.—Now you can haul up to 1-ton extra payload every trip with this shortest, lightest weight 48" BBC aluminum tilt-cab tractor.

CHOOSE FROM THIS COMPLETE LINE OF GMC SIX-WHEELERS

SERIES	GVW	GCW	ENGINE
105" BBC— W5000	35,000-37,000	50,000	V-6 180 hp.
W5500	43,000-48,000	60,000	V-6 210 hp.
90" BBC— BW5000	35,000-37,000	50,000	V-6 180 hp.
BW5500	43,000-48,000	60,000	V-6 210 hp.
BW7000	45,000-52,000	65,000- 76,800	V-12 275 hp.
BW9000	59,000-64,000	90,000-120,000	V-12 275 hp.
DBW7000	45,000-52,000	65,000- 76,800	*V-6 218 hp.
DBW9000	59,000-64,000	90,000-120,000	*V-6 218 hp.
72" BBC— LW5000	37,000	50,000	V-6 180 hp.
LW5500	45,000-48,000	60,000	V-6 210 hp.
LW7000	45,000-52,000	65,000- 76,800	V-12 275 hp.
DLW7000	45,000-52,000	65,000- 76,800	*V-6 218 hp.
48" BBC— DFW7000	36,000-45,000	65,000- 76,800	*V-6 218 hp.
DFW7100	43,000	76,800	*V-8 290 hp.

*Diesel—Max. Power

GMC Truck & Coach • A General Motors Division • Pontiac, Michigan



proved truer running easier on tires

Proved over millions of ton miles, the Kelsey-Hayes three-piece truck wheel provides more uniform tire bead support and uniform stress distribution which reduces rim fatigue! It is quieter and smoother running. And our unique lock ring construction affords fool-proof "blow-off" protection.



Component dimensional accuracy held to closest tolerances in the industry (here being checked in our lab) and advanced wide-base design are reasons why it is becoming the preferred design for commercial vehicles. Millions are now in service. Kelsey-Hayes Company, General Offices: Detroit, Michigan.

KELSEY HAYES COMPANY

World's largest producer of automotive wheels!

18 PLANTS: Detroit and Jackson, Michigan; Los Angeles; Philadelphia and McKeesport Pennsylvania; Springfield, Ohio; New Hartford and Utica, New York; Davenport, Iowa; Windsor, Ontario, Canada.



ACHIEVERFONE

designed for tomorrow —available today!

Within the next few years, the use of mobile radiotelephones will double — perhaps even triple — as fleet owners realize that this method of communication can greatly increase business potential. However, with the increase in traffic, many existing types of mobile phones with only one channel

will have difficulty in initiating and receiving calls.


AC considered this problem in designing their AChieverfone mobile radiotelephone. The answer was not one channel, but *four channels*. If one channel is busy, the user can switch to another channel, or a third, or a fourth, if necessary. There is no waiting for one channel to clear, no relayed

messages, no call-backs . . . you can talk to, or receive calls from any telephone or mobile phone in the world — anytime!

Feature for feature, AChieverfone is the best mobile phone available. It's more compact, takes less time to install and is more reliable. Consider AChieverfone for your vehicles and get tomorrow's business — today!



An Achievement in Mobile Communications

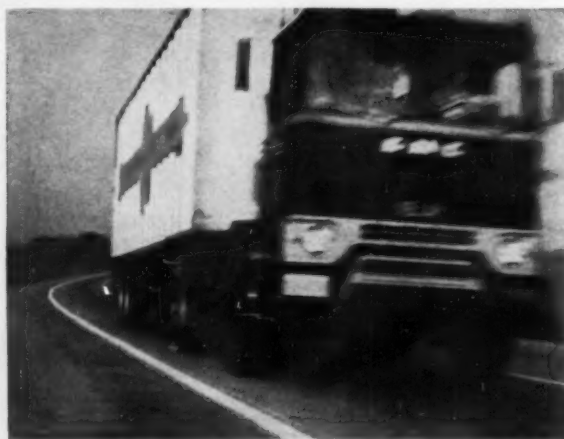
AC Spark Plug 

The Electronics Division of General Motors
Milwaukee 1, Wis. Telephone Broadway 3-1122

BATTERY FAILURE HERE COULD COST \$15,000!

*That's why Cooper-Jarrett Co., Chicago, depends on
Delco Dry Charge Batteries to cut fleet downtime!*

LOADED IN CHICAGO, A \$15,000 SHIPMENT OF PRIME BEEF BEGINS ITS JOURNEY TO MARKET IN THE EAST.



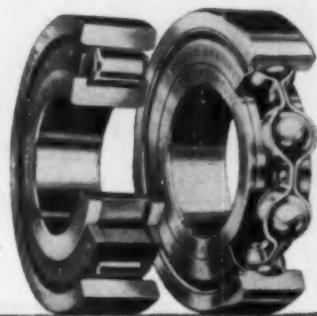
Cooper-Jarrett Company, Chicago, counts on Delco Batteries to guard a fortune in fresh meat on its 850-mile run to New York City. One Delco Battery starts the tractor's engine, two Delcos start the refrigeration unit that protects the beef. ■ Cooper-Jarrett uses Delco Batteries for one simple reason—reliability. They're built tough to stay tough . . . feature all-rubber case, heavy-duty plates and grids which mean less downtime, less maintenance and *more* miles of service! ■ Delco is dry charge, too—packed with 100% fresh, *rarin'-to-go* power, just waiting for the activator fluid to say "when." To keep your fleet going, follow the example of Cooper-Jarrett and hundreds of other fleets. Call your Delco Battery supplier and get the complete story on Delco DC, America's No. 1 Fleet Battery!

DELCO DC... Best to START with... Best to STAY with

Another reliable
General Motors product,
distributed nationally through



YOUR BUSINESS IS IN THE BALANCE . . . and bearing failures can work against you. That's why it's important to specify New Departure ball bearings and Hyatt roller bearings for your fleet. They provide reliability, the kind of worry-free, trouble-free service that helps to cut cents-per-mile costs and assure on-time delivery. N/D and Hyatt are leaders in bearing research, and together are the world's largest manufacturer of bearings for original equipment and replacement use. Their experience has produced high quality, durable bearings which set standards for the industry. These bearings are readily available to you through United Motors Service and its strategically located bearings warehouses throughout the country. So when you replace bearings, be sure you get the best fast. Get New Departure and Hyatt from your United Motors Service supplier.



New Departure and Hyatt bearings are distributed nationally through . . . U-M-S

HYATT **NEW DEPARTURE**

When reliability counts most:



Rely on Tung-Sol

It's not by chance that fleet after fleet depends on Tung-Sol Heavy Duty Headlamps to tackle the toughest, most demanding headlighting assignments. Tung-Sol 4005s and 6013s are engineered and built to deliver.

When the chips are down, their ruggedized construction features — durable filaments, anti-shock fog cap support, extra-strength spot weld leads, vibration-resistant ceramic collars — pay off in performance . . . the kind of performance that gets fleets through — safely and on time — whatever the road and weather conditions.

Switch your fleet to Tung-Sol and switch on the most rugged headlamps ever built. Automotive Products Division, Tung-Sol Electric Inc., Newark 4, N. J.



Bright new
Heavy Duty
packages

TUNG-SOL

Heavy Duty Headlamps

BRAKE MAINTENANCE TIPS FROM GREY-ROCK

How to select and use rivets and bolts

BRAKE LINING RIVET SIZES

4 Series		5 Series		7 Series		8 Series		10 Series	
5/16" head x 9/64" shank		3/8" head x 9/64" shank		3/8" head x 3/16" shank		1/2" head x 3/16" shank		1/2" head x 1/4" shank	
SIZE	LENGTH (in.)	SIZE	LENGTH (in.)	SIZE	LENGTH (in.)	SIZE	LENGTH (in.)	SIZE	LENGTH (in.)
4-4	1/4	5-4	1/4	7-4	1/4	8-8	1/2	10-8	1/2
4-4½	9/32	5-5	5/16	7-5	5/16	8-9	9/16	10-10	5/8
4-5	5/16	5-6	3/8	7-6	3/8	8-10	5/8	10-12	3/4
4-6	3/8	5-7	7/16	7-7	7/16	8-12	3/4	10-16	1
4-7	7/16	5-8	1/2	7-8	1/2				
4-8	1/2	5-10	5/8	7-10	5/8				
		5-12	3/4	7-12	3/4				
				7-16	1				

Shoe Size Variations

In recent years, design variations in brake shoes have been so frequent as to make impossible any general rule for selecting rivet sizes. Fabricated steel shoes, for example, are lighter and thinner than cast iron or aluminum shoes. But they may also be reinforced in certain areas, with the result that the rivets for any shoe have to be of different lengths. It is obviously necessary to know the lining thickness, shoe thickness, and diameter of rivet holes in order to select the rivet.

Rivet Size

A rivet is made with the bottom portion of the shank hollow. Select a rivet of such a length that the end of the solid section coincides with the inner edge of the metal shoe, only the hollow section protruding. Selecting too long a rivet means that the roll or clinch will fail to clamp the lining tightly to the shoe, causing brake squeal, chatter or erratic performance. Use of too short a rivet also results in a loose, but deceptively tight looking lining.

Information on selecting proper rivet size is shown in the table. For each rivet a hole size is recommended, usually 1/64 in. more than the diameter of the shank. This allows only sufficient clearance for the rivet to go in easily. *Shank size and head diameter should be carefully checked. Always use the largest diameter shank possible.*

Rivet sets or clinching tools

These tools come in sets for rolling the various rivet sizes. Be sure to use the one that corresponds with the particular rivet size. Too big a set will leave the roll uncompleted—wedge-shaped or tapered, incapable of holding the lining tightly to the shoe.

When applying the lining, start riveting at the middle pair of rivet holes, alternating between sides and working out toward the ends. A clamp should be used between each pair of rivets.

Rivet setters are supplied in two styles—roll sets and star sets. The star sets are designed for riveting

clutch facings—should never be used for riveting brake linings.

Note

Rivet sizes are specified by a combination of two numerals. The first numeral gives the head and shank diameters, the second numeral shows the length of shank in sixteenths of an inch.

Example—7-10 rivet has a 7/8 in. head, 7/16 in. diameter shank, and is 10/16 in. or 5/8 in. long.

Grey-Rock "Size Mark" rivets have the size stamped on the head of each rivet.

Grey-Rock Balanced Brake Blocks are accurately drilled and counter-bored. Correctly riveted or bolted to the shoe, they give smooth, balanced braking at every wheel and from axle to axle—for more miles between relines, fewer scored drums, less downtime—and a lower operating cost-per-mile. For details, see your Grey-Rock jobber or write Grey-Rock Division of Raybestos-Manhattan, Inc., Manheim, Pa.

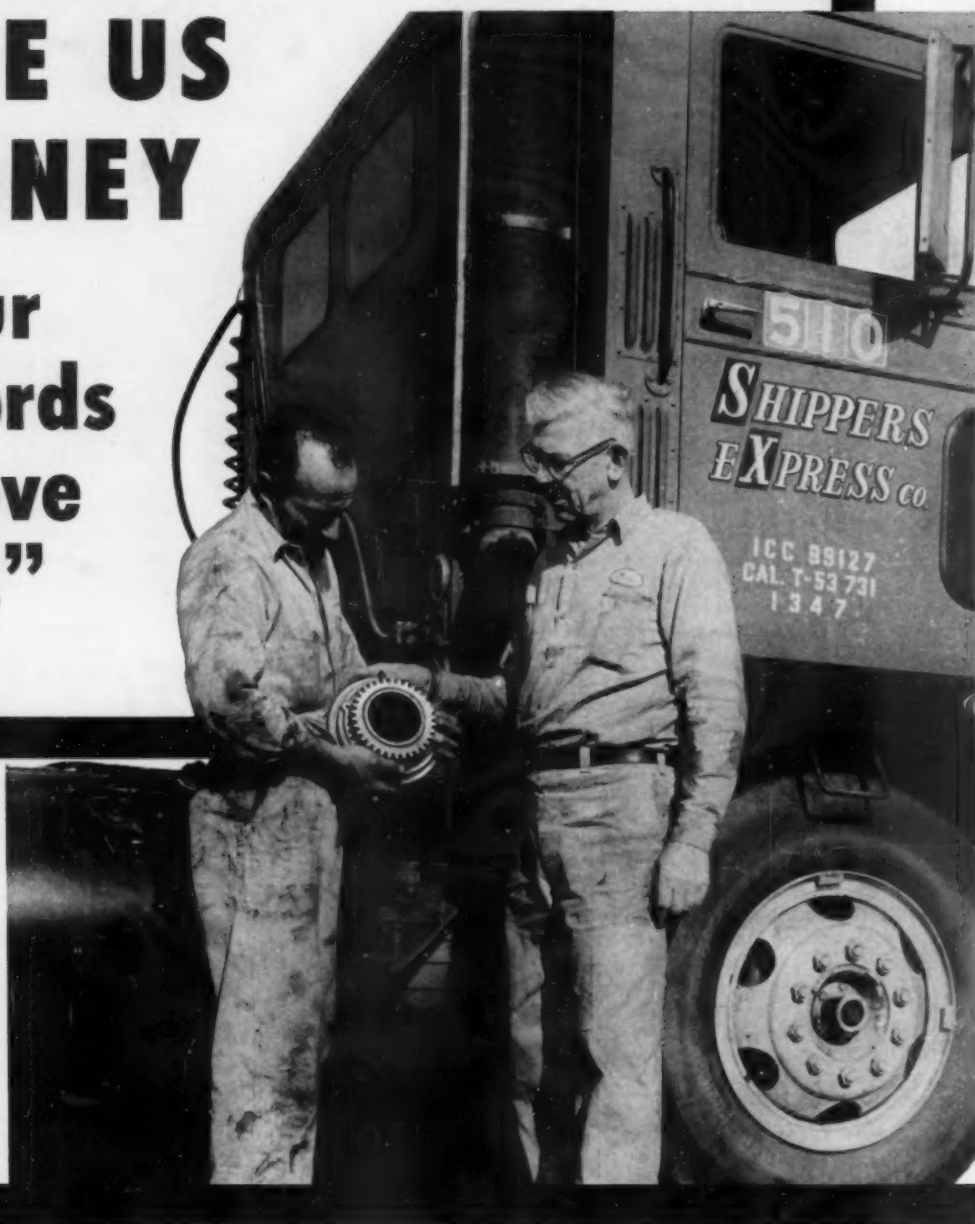
Only Grey-Rock® makes BALANCED BRAKE LININGS

BALANCED BRAKSETS • TRUCKSETS • BRAKE BLOCKS • VEE-LOK® CLUTCH FACINGS • AUTOMATIC TRANSMISSION PARTS

You Can't Buy a Better Brake Lining to Save Your Life

"SPICER COMPONENTS SAVE US MONEY

**...Our
Records
Prove
It!"**



C. W. McClurg, right, maintenance superintendent at Montebello terminal, shows mechanic Fred Curtiss that range synchronizer and clutch gear from Spicer 12-speed transmission is in perfect condition after 160,000 miles of service.

"We specify Spicer components," says C. W. McClurg of Shippers Express Co., Montebello, California, "because our experience, our maintenance records prove they're the most rugged, the most trouble-free we've ever used!"

"We specify Spicer components in our new trucks, and we insist on Spicer replacement parts. We know Spicer has helped keep our road failures 'way down! And we keep records that show right to the penny what our operating costs are. We stick to *rigid* preventive maintenance schedules.

"Another reason we specify Spicer—the availability of replacement parts everywhere we operate. From San Diego to Los Angeles to San Francisco Bay area to Sacramento—our rigs operate day and night, many of them over mountains with grades of 6 per cent, and everywhere we go we know we can get Spicer parts. This is one of the best ways we know to cut down-time.

"We specify every Spicer component we can possibly use—14 inch 2-plate clutches, 12-speed, 5-speed and 4-speed transmissions, 3-speed auxiliary transmissions, 1700-series universal joints and propeller shafts. And our maintenance records show Spicer prop shaft assemblies give us up to 400,000 miles before rebuilding is necessary. We get up to 300,000 miles on Spicer clutches before rebuilding, and the gears in Spicer transmissions generally last about 500,000 miles.

"The use of Spicer components fits in ideally with our cost-saving maintenance program. I base this on my 25 years' experience in trucking."

About Shippers Express Company . . .

"We operate 210 pieces of equipment," says Mr. McClurg. "This includes 17 three-axle rigs in our long-line equipment, 13 three-axle heavy duty trucks for local dispatching, 10 two-axle cab-overs, and 40 two-axle tractors for local deliveries.

"Shippers Express Company was founded in 1926 by A. D. Woolley, who is now chairman of the board. C. R. Hart is president and R. E. Woolley is vice-president and general manager. Our home office is in San Jose, California."

SPECIFY SPICER components for trouble-free operation, low maintenance cost, availability of replacement parts. For information on Spicer products write Dana Corporation, Toledo 1, Ohio.



DANA

CORPORATION

Toledo 1, Ohio

SERVING TRANSPORTATION—Transmissions • Auxiliaries
Universal Joints • Clutches • Propeller Shafts • Power Take-Offs
Torque Converters • Axles • Powr-Lok Differentials • Gear
Boxes • Forgings • Stampings • Frames • Railway Drives

Many of these products are manufactured in Canada
by Hayes Steel Products Limited, Merriton, Ontario



Do your rigs look like this?

KEEP THAT
NEW LOOK
with . . .



Each packet contains patch, sealant, rivets and instructions

SOUTHCO

Alclad Aluminum

NEW! Rivetpatch^{T.M.}

SAVE

- time
- labor
- money

FREE! Write for your copy of
Southco's Drive Rivet Folder.
Southco Division, South Chester Corp.,
228 Industrial Highway, Lester, Pa.

RIVETPATCH is a quick, low-cost method for repair of holes in truck and trailer bodies . . . will eliminate the unsightly appearance of irregularly shaped, costly handmade patches.

RIVETPATCH eliminates the need for wasteful cutting of irregular patches from large aluminum sheets with resulting crude appearance and loss of time and material. Southco Drive Rivets let you install the patch from one side of the job in just a few minutes. Every application has a neat, professional look—no matter who does it.

Available in three sizes: 3 x 5, 5 x 8, and 8 x 11 $\frac{5}{8}$ inches. Each RIVETPATCH pack contains a precision stamped, aircraft-type patch of Alclad aluminum with pre-punched pilot-holes, flared edges and rounded corners. Southco Rivets, sealant and directions are included.

SOUTHCO

© 1960

LION

**FASTENERS IMPROVE TRUCK BODY,
TRAILER AND BUS CONSTRUCTION**

PHONE YOUR LOCAL SOUTHCO DISTRIBUTOR

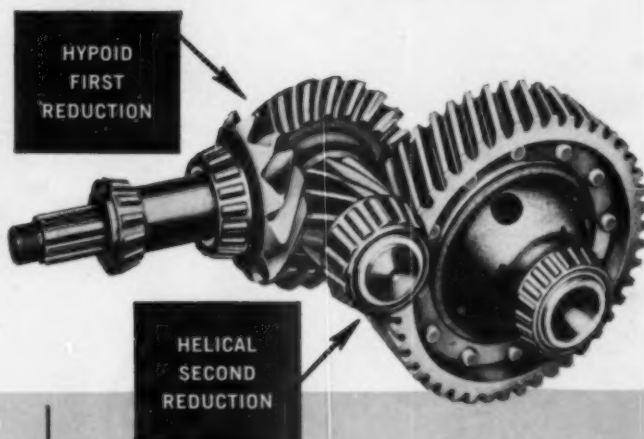


Heavy-Duty Hauling Jobs Are Easy With Timken-Detroit®

BALANCED

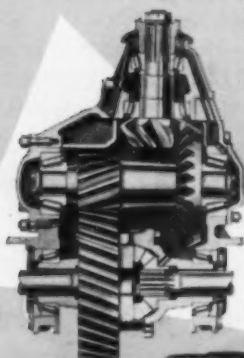
HYPOID-HELICAL DOUBLE-REDUCTION AXLES

Timken-Detroit balanced hypoid-helical double-reduction gearing is unequalled for top performance and dependability. Outstanding advantages that make it the choice of heavy-duty equipment manufacturers and operators are: big, husky gears... greater flexibility in gear ratios... balanced gear set loadings... long life and low maintenance costs. The hypoid first reduction is 30% stronger than spiral bevel, and works in series with the second reduction to take an equal share of the load. In the helical second reduction, strong helical gears with a wide range of ratios insure balanced double-reduction gearing.



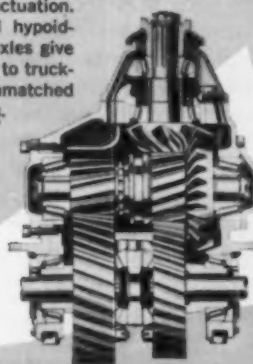
240 SERIES SINGLE-SPEED, HYPOID-HELICAL DOUBLE-REDUCTION

Two full-sized gear sets form a balanced power train—with each gear set accomplishing a substantial reduction. This combination of husky hypoid first reduction gears coupled with rugged, wide-faced helical second reduction gears provides a double-reduction gear set that outperforms all others. Because the ratios of each reduction may be varied, you get a balanced power train with the larger selection of axle ratios for maximum operational versatility and performance.



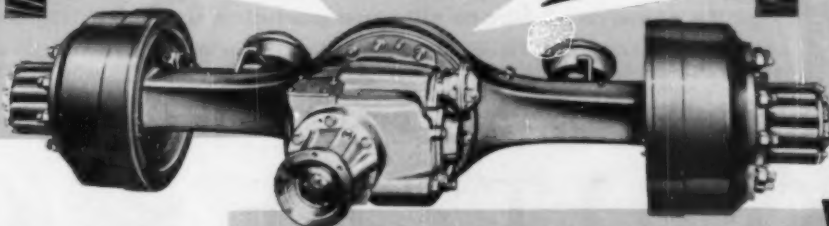
340 SERIES TWO-SPEED, HYPOID-HELICAL DOUBLE-REDUCTION

A true two-speed axle which provides two separate gear ratios through the use of two full-size helical gear sets... a "fast" ratio for maximum speeds and a "slow" ratio for greatest pulling power. Pick the most efficient gear ratio to meet your requirements of speed, load and road. Spring-flex power shifting provides simple, positive shifting with either air, vacuum or electric actuation. Timken-Detroit two-speed hypoid-helical double-reduction axles give a versatility and economy to trucking operations that is unmatched by other axle gear designs.



choice of two—

INTERCHANGEABLE BALANCED
DOUBLE-REDUCTION
DRIVES



Another Product of...

ROCKWELL-STANDARD
CORPORATION



Transmission and Axle Division, Detroit 32, Michigan

Make clean-up jobs easier and faster with . . .

DITZ-O 4-4-0



Use DITZ-O on acrylics, lacquers and enamels . . . removes silicones.

zips off old waxes and greases...gives undercoats a bulldog grip

DITZLER'S DITZ-O DX-440 is a fast-acting solvent that speedily removes old wax and grease. It leaves a *chemically clean* surface to which undercoats adhere more doggedly.

• The "floating action" of DITZ-O loosens and dissolves old polishing waxes, silicone particles, greases, oils, tar, and road dirt imbedded in the pores of the old finish. It floats them to the surface where they can be quickly wiped off. Unless thoroughly removed,

these undesirable materials can cause new finishes to blister, flake and peel.

• Although strong enough to dissolve wax and dirt, DITZ-O will not soften old or new paint film. And you can safely use it with primer-surfacer as it will not lift feather-edge or cause wrinkling at moldings.

• DITZ-O has no unpleasant odor. It's easy on the hands. You'll like its economy, too, as it goes farther than other solvents.



To remove stubborn silicone particles use SILICON-OFF

• Ditzler's SILICON-OFF DX-515 is especially formulated to clean finishes on which polishes containing silicone have been used. Unless thoroughly cleaned off, silicone particles can interfere with proper

flow, leveling and adhesion. They can cause craters or "fish eyes." With SILICON-OFF you quickly remove all traces of silicone as well as waxes, greases and oils. Can be used safely on acrylic finishes.

Ditzler Color Division, Pittsburgh Plate Glass Company • Detroit 4, Mich. • Torrance, Calif.

DITZLER®



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



The Corvair Lakewood 500 Station Wagon with up to 68 cubic feet of space for business gear.

'61 CHEVY CORVAIRS & CORVAIR 95 TRUCKS READY FOR ANY KIND OF FLEET DUTY!

Now you've got a big family of Corvair cars and Corvair 95 trucks ready to go to work for you. And wait till you see how much they save in your fleet operation.

Three things they've all got in common: thoroughgoing thrift, real dig-in-and-go traction and driver-sparing handling ease. The thrift part you'll really go for. Every model, from Corvair coupe to Corvan truck, is priced to start you saving pronto. And, naturally, that air-cooled rear engine never needs costly antifreeze or radiator repairs. Mileage? Plenty of it, on gas and tires and brakes.

We could go on and on about Corvair's traction and handling

ease. But we'll let your drivers do it for us, once they've been pulled out of a sticky spot by a Corvair, once they've wheeled a Corvair through knotty traffic.

Your Chevrolet dealer's the man to see, whether you want a Corvair sedan for salesmen or Corvair 95 pickups for delivery duty. Or both. He'll be glad to talk Corvair's kind of thrift over with you in any case. Make that visit soon. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



Hardworking Corvair 95's: Rampside



Corvan



The Corvair 500 4-Door Sedan with nearly 12% more underhood cargo space this year.

NEW LEECE-NEVILLE 40-AMP ALTERNATOR

6000-series
alternator
answers the
need for
adequate
electrical
power at
lower cost



The Leece-Neville Company, Dept. CG-1
1374 East 51st Street • Cleveland 3, Ohio

Please send me more information on:

- ☐ 6000-Series Alternator
☐ Heavy Duty Alternators

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

Type of Service _____

Leece-Neville, since 1946 the pioneer and leading supplier of alternators for heavy duty automotive service, announces a new, compact 40-Ampere alternator priced in line with comparable DC generators.

If you experience costly battery failures and other electrical system troubles with vehicles in your fleet, but feel that the money difference for 50 to 60-Ampere alternators previously available is too much to justify in your type of operation, Leece-Neville's new 6000-Series Alternator is the ideal solution. Under normal operating conditions, this power-packed alternator has a 40-Amp rating, and delivers 5 to 10 amperes at curb idle. With this unit, your battery is used only for starting the engine, remains charged at all times.

The new L-N 6000-Series Alternator is backed by Leece-Neville's 14 years of extensive field experience with heavy duty alternators, and by a 50-year reputation for building quality electrical equipment. Designed and constructed to Leece-Neville's usual heavy duty concepts, it will be available as factory-installed special equipment through almost all vehicle manufacturers.

RUGGED DESIGN... QUALITY CONSTRUCTION... HIGH PERFORMANCE AT LOW COST

- Compact and lightweight for savings in both space and weight.
- High performance 40-Amp rating at low cost in line with comparable DC generators.
- 5 to 10 amperes at curb idle.
- Replaceable built-in Silicon rectifiers mounted in separate high efficiency heat sinks, and protected from alternator heat (stator and rotor heat losses).
- Sealed anti-friction ball bearing at the drive end... efficient roller bearing at slip ring end.
- Slip ring assembly fully shielded to protect brushes and slip ring from contamination, assuring long life.
- Exclusive soldered connections between heat sinks and rectifier cells for better electrical and thermal conductivity.
- Silicon diodes (rectifiers) have built-in overload and high temperature capacity.
- Self-limiting current requires only simplified voltage regulator.
- Positive or negative ground types available.
- 6-volt types available.
- Reversible—clockwise or counter-clockwise rotation, limiting stock requirements.
- Heavy duty design concepts (protected windings, splash proofed, etc., at no extra cost to you).

TYPICAL TYPES OF SERVICE WHERE THE 6000-SERIES ALTERNATOR WORKS LIKE A TROJAN

Door-to-door Delivery
Taxis, Officials' Cars
Motor Freight
Civil Defense
Utility Companies

Construction
Ham Radio Cars
Suburban Police Units
Air Conditioned Cars
And many, many more—
including your personal car!

ALTERNATORS FOR ALL! Leece-Neville offers you alternators for every type of service, from passenger car to the biggest truck or tractor—all designed to save batteries, cut maintenance costs and practically eliminate downtime caused by electrical failure. For more information about the new 6000-Series Alternator, or alternators for heavy duty service, just mail the coupon at the left.

- More details? Circle 159 on reply card inside back cover

PUTS YOU WHERE THE PROFITS ARE!



GMC's Rotary Valve Power Steering puts you where the profits are because it saves time, reduces driving fatigue, shrinks maintenance and cuts down on vehicle damage. Rotary Valve Power Steering's positive road feel and handling ease keeps drivers more alert and efficient. Its exceptional responsiveness saves time loading and unloading, gets trucks roadbound faster. Power steering makes GMC Trucks more maneuverable, cuts down on bumps and dings in close quarters.

GMC Truck Power Steering reduces turning effort by as much as 70%, provides full hydraulic assistance instantly

at just 1½ degrees turn of the wheel. With power steering, only 8 to 11 pounds of effort is needed, even when maneuvering into tight parking spaces or crowded loading docks with maximum payload.

The clincher: Rotary Valve Power Steering has proven its mettle in millions of miles of highway and off-the-road travel. Combine it with GMC Truck's other new advances in engine, chassis and cab engineering, and you've got plenty of solid ways and means to cut down on costs and increase your profits! A product of Saginaw Steering Gear Division, General Motors Corporation, Saginaw, Michigan.

SUCCESS STORY ON THE BIG GMC BREAKTHROUGH...

THE TRUCK TRIUMPH OF THE 60's

● More details? Circle 160 on reply card inside back cover



LUBE LOGIC

FOUR CLUES



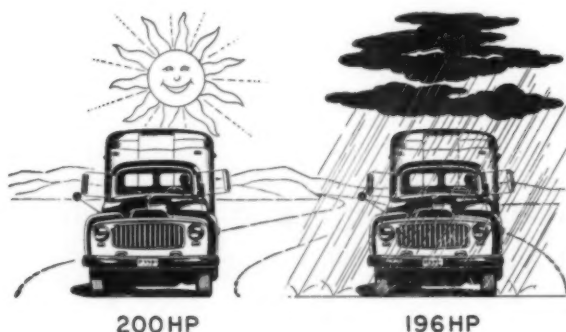
LUBE LOGIC

MONEY-SAVING IDEAS FOR AMERICA'S FLEETS

HEIGHT, HUMIDITY AND HORSEPOWER

Physicists explain why hills seem steeper when it's damp

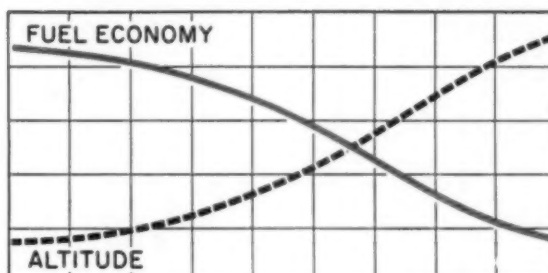
Mechanics who are usually the best of friends sometimes fly at each other when it comes to deciding what weather does to engines. For instance! Is it true that engines run better in humid weather? Why does a truck bowl through plains states without trouble and gasp and strangle on high-altitude roads? Do cars use more gas when it's raining?



Good questions all, and here are some answers that engineers and physicists have turned up.

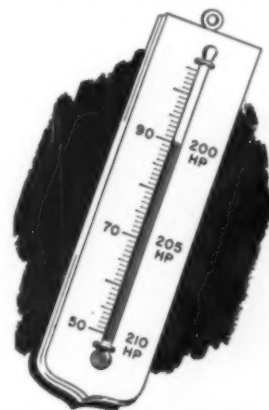
An engine rated at 200 horsepower will deliver 200 horsepower at sea level, in dry air, at a temperature of 60°F, SAE's "standard weather".

But at 100% humidity, the same engine will deliver only 196 hp, simply because the air that comes into the carburetor contains water vapor that crowds out some of the oxygen. However air moisture does decrease knocking tendency, thus contributing to engine smoothness and an overall impression of greater power.



Generally speaking, engine horsepower follows the barometer—up when the pressure is high, down when the pressure is low. The reason for this is that a climbing barometer indicates heavier air, so that, on a fine day, an engine gets more air to convert the fuel into power. At high altitudes engine power decreases because the air weight is lower.

Temperature is influential, too. A twenty degree drop in temperature will boost a 200-hp engine up to 205 hp. But, unlike power, economy drops with temperature, one of the reasons why fuel economy is better in summer than in winter.



ALSO IN THIS ISSUE:

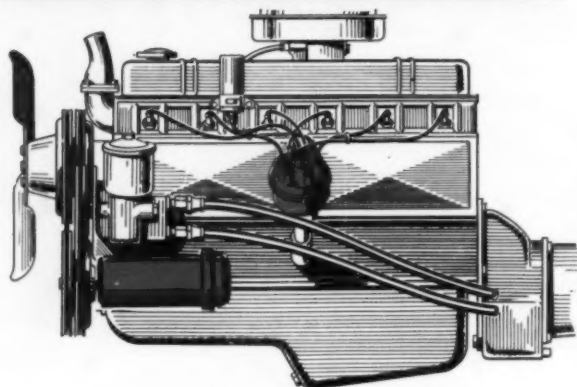
Trallin' the Mail With AL

4 clues for cutting cost-per-mile

HOW TO TEST ENGINE COMPRESSION PRESSURE

FOR CUTTING COST-PER-MILE

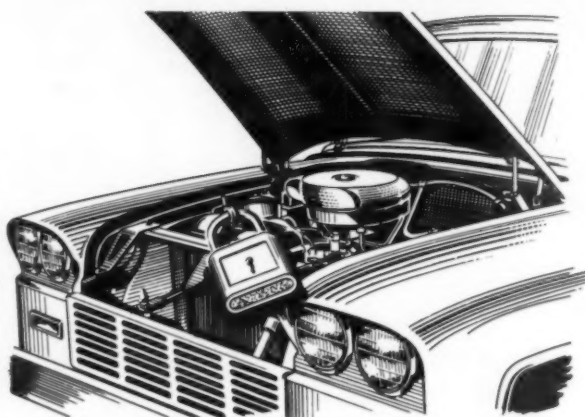
LUBE LOGIC



LEST WE FORGET: GENERATORS AND DISTRIBUTORS NEED LUBRICATION, TOO

We'd be willing to bet that top honors for lube-points-most-likely-to-be-neglected go to the generator and distributor. Many symptoms that *seem* to indicate ignition problems can actually be traced to a sluggish distributor that didn't get lubricated in time. And a generator that's been neglected will start squealing and maybe seize and have to be replaced. Moral: generators and distributors will go a long way on a little lubrication, but make a point of checking them not later than every 4,000 miles.

FOUR CLUES



POSITIVELY PERMANENT ANTIFREEZE?

We've been getting a lot of questions lately about switching to the new chemical positively permanent type antifreeze, particularly from fleet owners who operate their equipment in areas where high-mineral content water promotes early cooling system clogging. The good word from Texaco's Beacon research men is that you can get the same year-round protection—for less money—by using Texaco PT antifreeze and distilled water. Check with your local TAE before you stir up a batch on your own. He'll be glad to tell you what proportions of PT and distilled water are correct for your area.



Trailin' the Mail

DEAR AL,
I've got a problem with a leaky radiator that nothing seems to solve. Engine heads and blocks are OK, no water shows up in the oil, and no excessive moisture in the exhaust. I checked the radiator, and it held nine pounds pressure for three minutes without any loss. I managed to relieve the problem a little by switching from a pressure-cap to a non-pressure cap, which cut water loss from a quart every 200 miles to a quart every 1000 miles, but that doesn't solve the problem, and it's still a nuisance.

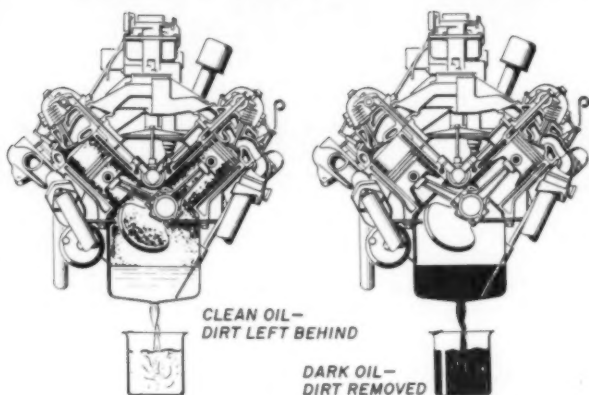
R. S., Wilbur, Wash.

I know from experience how tough it can be to find a cooling system leak. The hole you're looking for is probably no bigger than a pin, and it's most probably in the radiator core or the car heater core. It'll be easier to locate if you fill up the cooling system and add some red or blue water-soluble dye, since the color will remain at the leak even if the water should evaporate before you spot it. When you're through you simply wash off the residual dye with water. Pres-

surize the cooling system with a radiator cap tester or a hand tire pump to about 15 pounds pressure (four or five strokes of the tire pump). Don't, under any circumstances, use the air hose for this purpose unless you're really disgusted and want to blow up the whole works. When you examine the radiator, pay particular attention to the points where the core meets the shell at the sides and the tanks at top and bottom. The leak will be just above each dye stain you find.

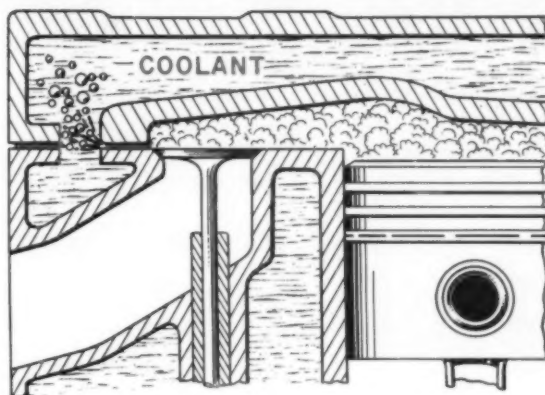
To fix the leak, drain the cooling system and plug each leaking cell thoroughly with a commercial plastic aluminum or "heatless solder". Make sure the plug covers the edges of the cell. Careful plugging of individual cells won't materially cut down on the cooling efficiency of the radiator; in fact, you may find some cells that were plugged with solder by the manufacturer. Once your plug-material has hardened you can refill your radiator and, with any luck at all, you're on your way.

FOR CUTTING COST-PER-MILE



DARK ENGINE OIL ... SIGN OF A HARD WORKER

Here's a motor-oil misconception that's still common enough to need discussion. Some folks think that the better an engine oil is, the more likely it is to come out as clean as it went in. The truth of the matter is just the other way around. A good detergent-dispersant oil holds onto dirt like an old friend. It keeps dust, soot and carbon in suspension, and carries it out of the engine when you drain the oil. Oil that looks clean when you drain it from the crank-case is a sure sign that these contaminants are still inside the engine. Moral: oil that darkens with use is really doing its job.



CHECK CYLINDER HEAD JOINTS FOR CHRONIC OVERHEATING

If you've got a truck that continues to overheat even though you've checked out all the likely causes (slipping fan belt, leaks in pressure cap or radiator core) take a close look for a loose cylinder head joint. An opening here would be too small for coolant to leak into the engine, but plenty big enough to admit high-pressure exhaust gas into the coolant. Exhaust gas would push out a lot of coolant through the overflow pipe, and also contaminate whatever water remains. This contaminated water might become acid enough to do some real damage. A crack in the head or block would have the same effect.

with AL

★ Shoot in your puzzlers to "Trailin' the Mail with Al," at Texaco's Fleet Sales Division, 135 East 42nd Street, New York 17, N. Y. There's a real fine group at the Division — ready to serve every "on-wheels" fleet from coast to coast.

DEAR AL,

We have an 8-cylinder pickup that keeps burning up the spark plug on one cylinder. It's the same cylinder each time. New points and condenser didn't help. What do we do now?

W. M. D., Dillonvale, Ohio

It's most unusual to have one plug burn repeatedly when nothing seems to happen to the other plugs. Indications are that there's something wrong with the cylinder, not with the ignition system, which explains why you didn't get any improvement with new points and condenser. First off, make sure you're using the right plug—same stock number and heat range on all eight cylinders. Then check out some of these causes for one-plug burning:

1. Check the intake manifold to see if it's loose or warped, or if the gasket is leaky. Any one of these would let outside air into the cylinder, make the gasoline mixture too lean in that one cylinder. If this seems to be the problem, check the leak by idling the engine

and putting a drop or two of gasoline at the point where the intake manifold meets the cylinder head. If the engine speeds up, it's clear that you're getting too much air and not enough gas in the cylinder.

2. Run a tap through spark plug port threads to clear out possible carbon accumulation.

3. Make sure the plug is in tight.

4. Check for old gaskets in the spark plug port. If there's more than one, replace them with a single new one.

5. Flush the engine thoroughly. Cylinder head cooling passages around the spark plug base may be clogged with rust, mud or hard-water calcium deposits. Flushing might remove mud and loosen rust, but calcium deposits require careful treatment with inhibited acid.

DEAR AL,

Every week I service three trucks that do most of their hauling over rough

roads at low speeds. Two of these trucks use EP 90 for differential lubrication, but the differentials run very hot. The third truck uses Texaco Thuban 90, and doesn't run as hot as the others. The trucker wants to know if he should switch to Thuban 90 on the other trucks.

S. R. T., Marathon, Texas

Trucks that are equipped with spiral bevel gears in the rear axle will perform very satisfactorily on a high-grade straight mineral oil like Thuban 90. But most trucks now use hypoid gear lubricants. If you put a straight mineral oil into one of these hypoid axles it would probably wreck the axle very quickly. Since you can't arbitrarily switch to straight mineral oil on the other trucks, double check to make sure they're getting the right viscosity for the climate and type of service they're in. I would expect your trucks to run pretty hot, which means that any differential lubricant would oxidize, and should be replaced regularly and frequently.

LUBE LOGIC

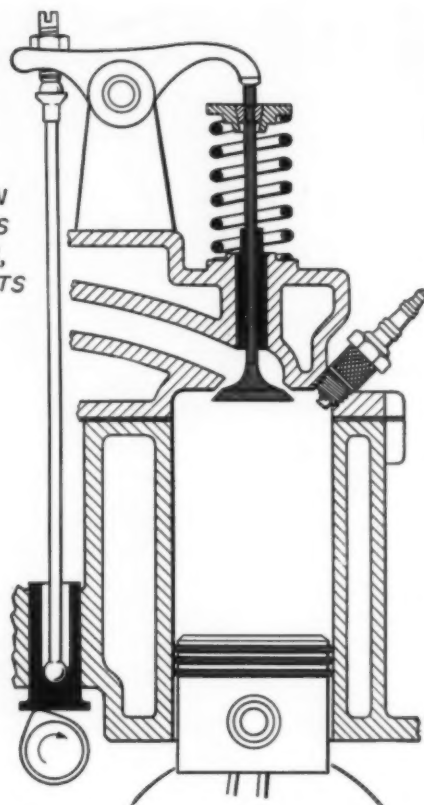
Short course on checking compression pressure

Tuning up an engine that has leaky valves, excessively worn rings or leaky cylinder-head gaskets is at best a short-term proposition even if you do manage to get it tuned up properly. And since the conditions we mentioned above eat up profits by cutting down performance, we'd like to show you how to find out if these conditions exist. Basic equipment is a pressure gauge, but there's a right way and a wrong way to use it. This is the way we like best.

1. Warm up the engine to operating temperature and remove the air cleaner. If the engine has mechanical valve lifters, valve lash should be adjusted to specifications before you go any further.
2. Block the automatic choke in the wide-open position so you get a full charge of air but no gasoline when you crank the engine.
3. Ground the primary wires of the coil so you don't get an unexpected charge through disconnected spark plug wires.
4. Disconnect all spark plug wires and remove the plugs.
5. Select the right size fitting for the gauge and screw the fitting into the spark plug port; attach the gauge.
6. Crank the engine with the starter; read and record the pressure.
7. Remove gauge from fitting, remove the fitting, and repeat the whole process with each cylinder.
8. Compare your readings with the values specified by the manufacturer.

Here are some of the symptoms your readings may show, and what the symptoms mean:

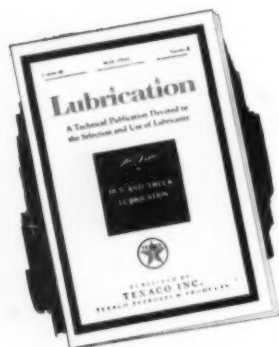
COMPRESSION
TEST REVEALS
WORN VALVES,
RINGS, GASKETS



1. Low compression in two adjacent cylinders probably indicates that the cylinder head gasket is blown or leaking and losing pressure between the cylinders.
2. Low compression pressure in one cylinder is usually ring trouble or valve trouble. To find out which, pour a tablespoonful of SAE 50 oil into the cylinder through the spark plug port, and retest compression pressure. If the pressure comes up almost to the specified value, it means you're losing compression past a worn piston ring which the spoonful of oil has temporarily sealed. If compression reading doesn't change appreciably after you've added the oil, leakage past the valves is indicated, or, possibly, through the cylinder head gasket.

FREE—FROM TEXACO

THE LOWDOWN ON BUS AND
TRUCK LUBRICATION



The May issue of Texaco's *Lubrication Magazine* gives latest and most efficient ways to lubricate and operate trucks and buses. You can get your free copy simply by writing to Texaco Inc., Fleet Sales Division, 135 East 42nd Street, New York 17, N.Y., Department CCJ-102.

TEXACO AUTOMOTIVE ENGINEERS



Every month we'll bring you the latest "doings" in servicing and lubricating your trucks. We'll also bring you "sleepers," little angles, easy to overlook, where big savings in time and money can be made. But month in, month out, your local Texaco Automotive Engineer is the best source for money-saving lubrication ideas. Don't forget that "Lubrication is a major factor in cost control." Texaco Inc., Fleet Sales Division, 135 East 42nd Street, New York 17, N. Y.

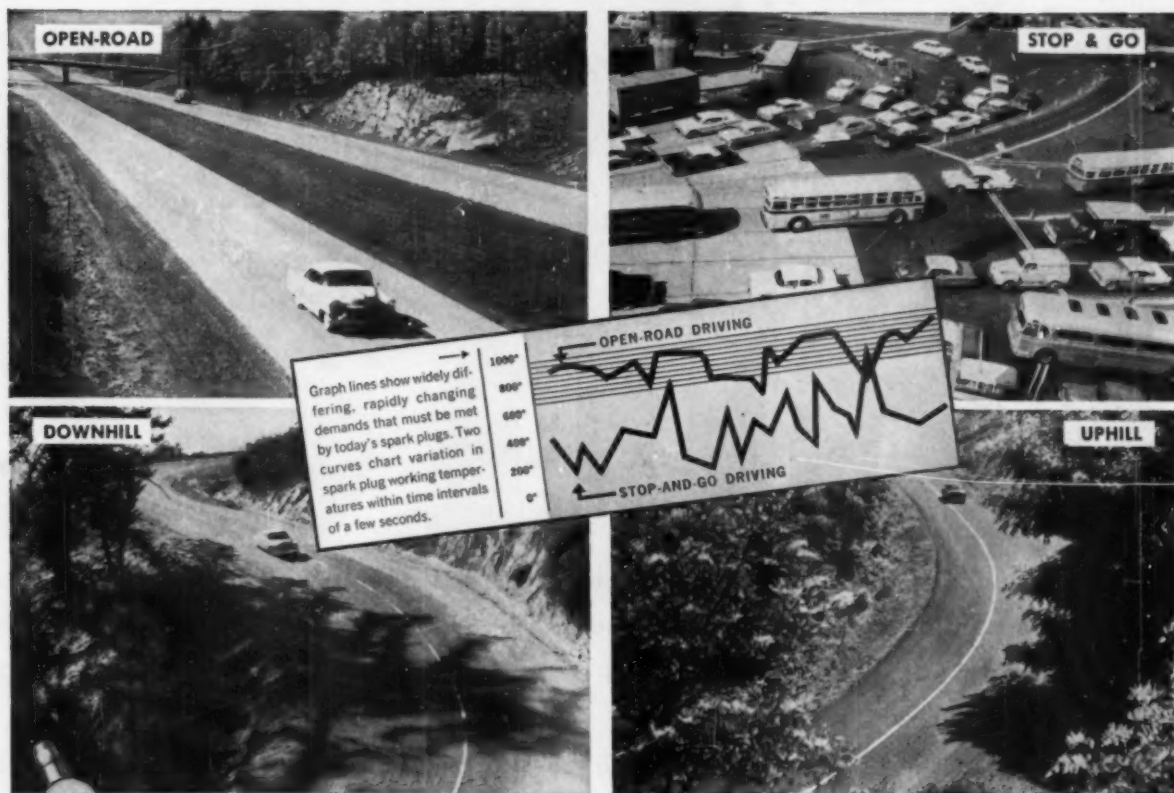
TEXACO 
Throughout the United States

Canada • Latin America • West Africa

Tune In: Texaco Huntley-Brinkley Report, Mon. Through Fri.-NBC-TV

ROBERT BOSCH *thermo-elastic* SPARK PLUGS ADAPT THEIR WORKING TEMPERATURES

to every driving situation



Lower cost-per-mile for you with extraordinary

ROBERT BOSCH *thermo-elastic* SPARK PLUGS

The plug that lowers your cost-per-mile because it "thinks" for itself—that's ROBERT BOSCH thermo-elastic. Working temperatures adapt for every driving situation—stop-and-go, open-road, uphill, downhill, cold or hot weather. The exclusive diamond-hard Pyranit® insulator does it, its tip heated from the inside and outside—uniformly, simultaneously.

ROBERT BOSCH thermo-elastic plugs, properly selected, prevent pre-ignition, fouling, loss of power. Unmatched for smooth-running, long-life. Many famous engines are originally equipped with ROBERT BOSCH thermo-elastic plugs. Ask your supplier about the complete line of sizes and heat ratings or write

ROBERT BOSCH CORPORATION

40-25 Crescent Street, Long Island City 1, N. Y. • 225 Seventh Street, San Francisco 3, California

® Reg. U. S. Pat. Off. ROBERT BOSCH GMBH Stuttgart

**WHEN IT COMES
TO WHEELS
REMEMBER THE**

FACTS!

Today's Budd Wheel leads all others in improved design and economy...thanks to Budd's continuous programs of research and development, testing and quality control. And Budd Wheels are backed by more than 40 years of experience and leadership in the wheel industry.

It makes sense—dollars-and-cents sense—to ride with the leader. Specify Budd Wheels and genuine Budd Wheel Parts, ***the perfect combination for greater economy in the long run.***

The Budd Company, Detroit 15.

THE BEST WHEELS ARE BUILT BY

NATIONWIDE SERVICE

AKRON—Motor Rim Manufacturers Co.
ALBANY—Wheels Incorporated
ALBUQUERQUE—Wheels & Brakes, Inc.
ALTOONA—Wheel & Rim Sales Co.
ATLANTA—John A. Harris & Son, Inc.
BALTIMORE—Standard Wheel & Rim Co.
BIRMINGHAM—Wheel, Rim & Parts Co.
BOSTON—New England Wheel & Rim Co.
BUFFALO—Frey The Wheelman, Inc.
CEDAR RAPIDS—Des Moines Wheel & Rim Co.

CHARLOTTE—Carolina Rim & Wheel Co.
CHICAGO—Stone Wheel, Inc.
CINCINNATI—Rim & Wheel Service, Inc.
CLEVELAND—Motor Rim Manufacturers Co.
COLUMBUS—Hayes Wheel & Spring Service
DALLAS—Southwest Wheel, Inc.
DAVENPORT—Midwest Wheel & Rim Co.
DAYTON—Rim & Wheel Service, Inc.
DENVER—Quinn & McGill Motor Supply Co.
DES MOINES—Des Moines Wheel & Rim Co.
DETROIT—H. & N. Wheel Service, Inc.
DUBUQUE—Midwest Wheel & Rim Co.

EL PASO—Southwest Wheel, Inc.
EVANSVILLE—Auto Wheel & Rim Service Co., Inc.
FARGO—Wheel Service Company
FARMINGDALE, L. I., N. Y.—Wheels Incorporated
FORT WAYNE—Wheel & Rim Sales Co.
GRAND RAPIDS—Rim & Wheel Service Co.
HAMMOND—Stone Wheel, Inc.
HARRISBURG—Standard Wheel & Rim Co.
HARTFORD—Connecticut Wheel & Rim Co.
HOUSTON—Southwest Wheel, Inc.
INDIANAPOLIS—Indiana Wheel & Rim Co.
JACKSONVILLE—Southwest Wheel & Rim Co.

KANSAS CITY—Borbein, Young & Co.
KNOXVILLE—John A. Harris & Son, Inc.
LANCASTER—Standard Wheel & Rim Co.
LOS ANGELES—Wheel Industries, Inc.
LOUISVILLE—Auto Wheel & Rim Service Co., Inc.
LUBBOCK—Southwest Wheel, Inc.
MEMPHIS—Beller Wheel, Brake & Supply Co.
MILWAUKEE—Wisconsin Wheel & Rim, Inc.
MINNEAPOLIS—Mutual Wheel Co.
NASHVILLE—Beller Wheel, Brake & Supply Co.
NEWARK—Automotive Safety Inc.

BUDD WHEELS are proven best...



**...on high-speed
expressways**



...in the mountains



...on the desert

AUTOMOTIVE **Budd** **DIVISION**

**WHEN YOU ARE IN DETROIT for
the SAE International Exposition of
Automotive Engineering, be sure
to visit the Budd Exhibit adjacent
to the Science Pavilion.**

NEW HAVEN—Connecticut Wheel & Rim Co.
NEW LONDON—Connecticut Wheel & Rim Co.
NEW ORLEANS—Southern Wheel & Rim Service
NEW YORK—Wheels Incorporated
OKLAHOMA CITY—Southwest Wheel, Inc.
OMAHA—Morgan Wheel & Equipment Co., Inc.
OMAHA—Omaha Rim & Wheel Co.
PEORIA—Peoria Wheel & Rim Co.
PHILADELPHIA—Kay Wheel Sales Co.
PHILADELPHIA—Thomas Wheel & Rim Co., Inc.
PITTSBURGH—Wheel & Rim Sales Co.
PORTLAND—Six Robblees, Inc.

PROVIDENCE—New England Wheel & Rim Co.
RALEIGH—Caroline Rim & Wheel Co.
RICHMOND—Dixie Wheel Co., Inc.
ROCHESTER—Frey The Wheelman, Inc.
SALT LAKE CITY—Henderson Rim & Wheel
Service
SAN ANTONIO—Southwest Wheel, Inc.
SAN FRANCISCO—Wheel Industries, Inc.
SAVANNAH—Southeast Wheel & Rim Co., Inc.
SEATTLE—Six Robblees, Inc.
SOUTH BEND—Wheel & Rim Sales Co.
SPOKANE—Bearing & Rim Supply Co.

SPRINGFIELD, ILL.—Illinois Wheel & Brake Co.
SPRINGFIELD, MASS.—New England Wheel &
Parts, Inc.
SPRINGFIELD, MO.—Borbein, Young & Co.
ST. LOUIS—Borbein, Young & Co.
ST. PAUL—Wheel Service Co.
SYRACUSE—Wheels Incorporated
TACOMA—Six Robblees, Inc.
TOLEDO—Wheel & Rim Sales Co.
VINELAND—Kay Wheel Sales Co.
WICHITA—Borbein, Young & Co.
WINSTON-SALEM—United-Automotive Service

EXPORT
CLEVELAND, OHIO—C. O. Brandes, Inc.
4900 Euclid Avenue
CANADA
CALGARY—Mutual Supplies, Ltd.
EDMONTON—Alberta Wheel Distributors, Ltd.
LIMOULOU—Palmar Automotive, Ltd.
MONTREAL—Auto Wheels & Supplies, Ltd.
REGINA—Brakes & Wheels, Ltd.
TORONTO—Wheel & Rim Co. of Canada, Ltd.
VANCOUVER—Wheels & Equipment, Ltd.
WINNIPEG—Ft. Garry Tire & Auto Supplies

MEET THE NEWEST MEMBER OF A FAMOUS STEEL FAMILY...



"T-1" type A steel

Since its introduction in 1953, USS "T-1" Steel has become one of the world's best known steels. Its extraordinary strength, toughness, weldability and resistance to impact abrasion have increased service life of equipment as much as ten times. No other steel has equaled "T-1" Steel's record of success.

The new USS "T-1" Type A Steel is the first addition to this family of constructional alloy steels. It is a quenched and tempered constructional alloy steel produced in thicknesses through 1" maximum with the same tremendous strength, weldability and resistance to impact abrasion as "T-1" Steel. However, through the development of a new analysis, "T-1"

Type A Steel is a *more economical* steel for many applications.

USS "T-1" Type A Steel was developed through U. S. Steel's continuous research efforts to produce new and better products at the lowest possible cost. It is available in bars and semi-

finished form and in plates from $\frac{3}{16}$ " through 1" thick inclusive, and in the full range of plate widths and lengths now available in USS "T-1" Steel. If extra hardness is needed, USS "T-1" Type A Steel can be furnished to a minimum Brinell hardness of 321.

For your copy of a properties card on USS "T-1" Type A Steel, write United States Steel, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

USS and "T-1" are registered trademarks



SUGGESTED APPLICATIONS: Earthmoving and mining equipment, building construction, bridges, truck frames and bodies, missile transporters and launchers, oil field rigs and machinery transporters—wherever great strength, weldability, toughness, and resistance to impact abrasion are needed to build equipment stronger, lighter and more durable.

USS "T-1" Type A Steel Mechanical Properties and Chemistry

1. Produced in gages up to 1", inclusive.
2. Sold to the following chemistry: †

C	.12/.21	Cr	.40/.65
Mn	.70/1.00	Mo	.15/.25
P	.040 Max.*	V	.03/.08
S	.050 Max.*	B	.0005/.005
Si	.20/.35	Ti	.01/.03

3. Quenched and Tempered to meet the following mechanical properties:

	3/16" to 3/4" incl.	Over 3/4" to 1" incl.
Min. Yield Strength	100,000 psi	100,000 psi
Tensile Strength	115,000/135,000	115,000/135,000 psi
Elongation in 2"	18% min.	16% min.
Reduction of Area	40% min.	50% min.

4. Charpy impact values**
15-foot-pounds at minus 50°F. based on longitudinal keyhole test.
5. This steel can also be produced to a min. BHN of 321, and when so produced, all other mechanical properties are waived.

6. Atmospheric corrosion resistance—at least two times that of structural carbon steel.

*When ordered to FBQ (Fire Box Quality) max. P is .035 and max. S is .040.

**Applies only to FBQ

†U. S. Patent No. 2858206



United States Steel Corporation—Pittsburgh
Columbia-Geneva Steel—San Francisco
National Tube—Pittsburgh
Tennessee Coal & Iron—Fairfield, Alabama
United States Steel Supply—Steel Service Centers
United States Steel Export Company

United States Steel

This mark tells you a product is made of modern, dependable Steel.



Growing Preference at Nation-Wide Fleets Proves

THE TREND IS TO LIPE



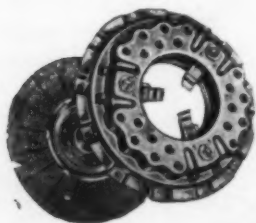
Miller Motor Express of Charlotte, N. C. has installed Lipe Clutches in 40 units. More are in process.

Month by month, year by year, the increasing number and size of orders for Lipe Heavy-Duty DPB Clutches bears out the growing preference of fleet men.

This preference is soundly based on the fleet men's own experience. They try DPB's. They keep performance and maintenance records. They compare. And the results are plain to see:

More ton-miles per year . . . more engagements between shop-stops . . . lower cost of maintenance when maintenance is necessary. By any yardstick of costs, these are figures difficult to dispute.

And they all add up to another indisputable fact: *The trend is to LIPE.*



You can get Lipe Factory-Exchange or Interchange Clutches for Vehicles 18,000 lbs. GVW and up. See your Lipe Jobber: He's listed in the Yellow Pages.



MOPAR ANNOUNCES A COMPLETE REMANUFACTURED PARTS

(FOR ALL MAKES OF VEHICLES)

This seal on a MoPar Approved Remanufactured Part means that the part has been: (1) remanufactured by a MoPar Approved Parts Remanufacturer; (2) remanufactured to exacting specifications furnished by MoPar.



Now—for the first time—a COMPLETE QUALITY LINE...

MoPar Remanufactured Parts for Chrysler Corporation
products...and Remanufactured Parts for other vehicles

NEW LINE OF

MoPar proudly announces an entirely new concept in remanufactured parts . . . offering—

NEW quality control
NEW one-stop service
NEW fast distribution

Now MoPar Parts Wholesalers and Chrysler Motors Corporation Dealers are your headquarters for the first truly COMPLETE quality line—

1. MoPar Approved Remanufactured Parts . . . precisely engineered to fit all Chrysler Corporation vehicles . . . and

2. Quality Remanufactured Parts . . . for outstanding performance in other makes of vehicles!

SAVE TIME, SAVE MONEY!
INSTALL RATHER THAN OVERHAUL!

These remanufactured parts fit right—install quickly—cost less. **Warranty replacement** is offered on a nation-wide basis (4000 miles or 90 days) by the MoPar Approved Parts Remanufacturers, through participating Chrysler Motors Corporation Dealers.

FULL LINE NOW AVAILABLE! These and many other parts available now . . . a complete line . . . no bobtailing.

6 and 8 cylinder engines (short and complete blocks)	voltage regulators
V-8 cylinder heads	carburetors
automatic transmissions	clutch assemblies
fuel pumps	crankshafts
generators and armatures	oil pumps
starters and armatures	connecting rods
	torque convertors

For High Quality and Low Cost—Call Your MoPar Wholesaler or Chrysler Motors Corporation Dealer Now!



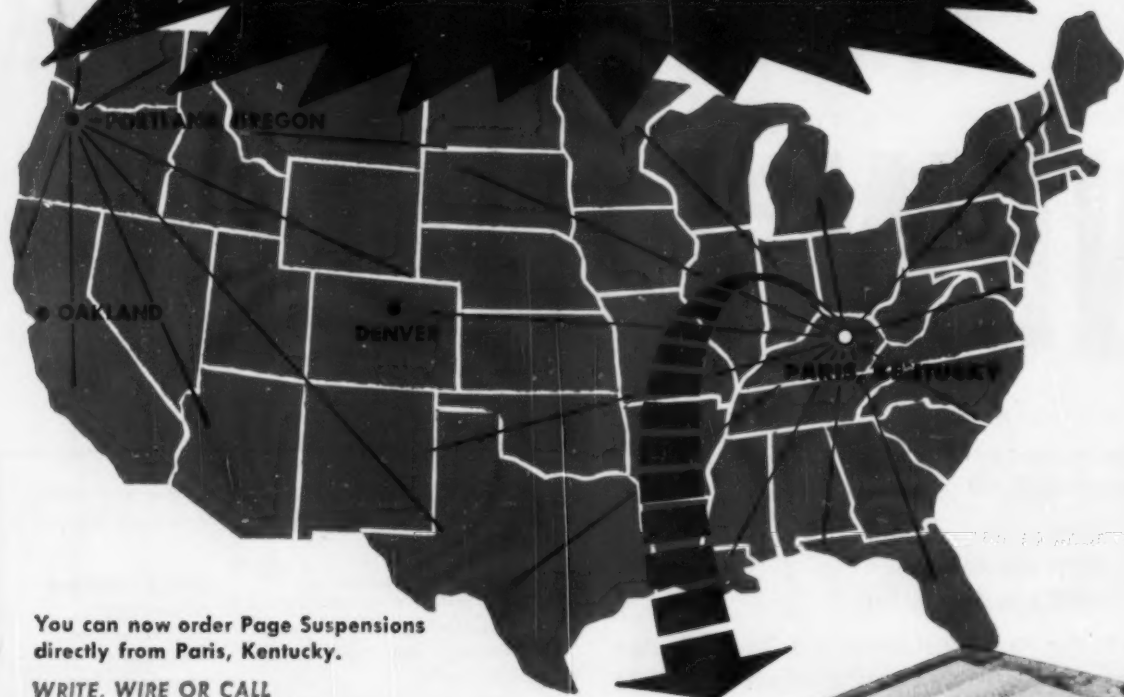
MOPAR PARTS AND ACCESSORIES, CHRYSLER MOTORS CORPORATION, DETROIT 31, MICHIGAN

COMMERCIAL CAR JOURNAL, January, 1961

● More details? Circle 104 on reply card inside back cover

71

NOW PAGE SUSPENSIONS ARE ALSO MANUFACTURED IN PARIS, KENTUCKY!



You can now order Page Suspensions
directly from Paris, Kentucky.

WRITE, WIRE OR CALL
PARIS PRODUCTS DIVISION,
DURA CORPORATION; PARIS, KENTUCKY.
Telephone 1980 • TWX-Paris, Ky. 8280



COAST TO COAST DISTRIBUTION
TO SERVE YOU BETTER AND FASTER!

PAGE



PAGE co.

FACTORY AND HOME OFFICE

0605 S. W. CURRY, PORTLAND 1, ORE.

DENVER BRANCH
3001 WALNUT STREET
DENVER 5, COLORADO

OAKLAND BRANCH
749-77th AVENUE
OAKLAND 21, CALIFORNIA

PARIS PRODUCTS DIVISION
DURA CORPORATION
PARIS, KENTUCKY

"ENGINEER

APPROVED"

**The Pistons used by
over 70% of all
Truck and Bus
Manufacturers**



*Pistons for every type
internal combustion engine
— Gasoline or Diesel*

CLEAR-○-MATIC

BOND ○ LOC

CONTINUOUS PERMA-GROOVE

PISTONS
by

ZOLLNER

Proved by Fleet Records everywhere

★ **Highest Engine
Performance**

★ **Lowest
Maintenance
Cost.**

By the test of experience — by fleet owner maintenance records — the proof stands out — fleets roll more profitably with Zollner piston equipment. Year after year, for 29 consecutive years, the winners of fleet owner maintenance awards use pistons by Zollner. In developing the most efficient piston for each engine service, Zollner engineers work in close cooperation with engine builders to assure the utmost in piston performance and operating economy. Zollner pistons are the equipment of over 70% of all makes of trucks and buses — and the dominant choice of fleet owners. For your profit, be sure to specify Zollner for every reconditioning job.

ZOLLNER CORPORATION • FORT WAYNE, INDIANA

DOMINANT POPULARITY IS THE BEST ASSURANCE OF FINEST PERFORMANCE

HARD STEERING?

A grease-hungry 5th wheel may be to blame



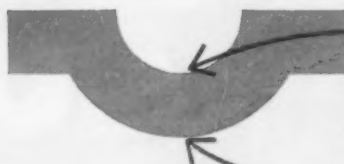
Both ASF and Simplex 5th Wheels are cast-steel construction to provide an adequate — and deep — grease-groove pattern at no sacrifice in strength!

In cases of steering trouble, check your 5th wheel bearing surface—the grease pattern and contact with trailer bed plate. Many operators have licked steering problems by switching to ASF and Simplex 5th Wheels.

Not only do you get far better lubrication in ASF's cast-steel construction, as shown in the illustrations; in addition, the plates offer maximum possible bearing surface. Result: less pounds' pressure per square inch.

Only with cast steel is it possible to get these fundamental advantages. See your ASF Distributor for information on the finest 5th wheels your money can buy; or write American Steel Foundries, East Chicago, Indiana.

CAST-STEEL 5th WHEEL



Adequate depth here ...

Adequate strength here

FABRICATED 5th WHEEL



Inadequate depth here ...

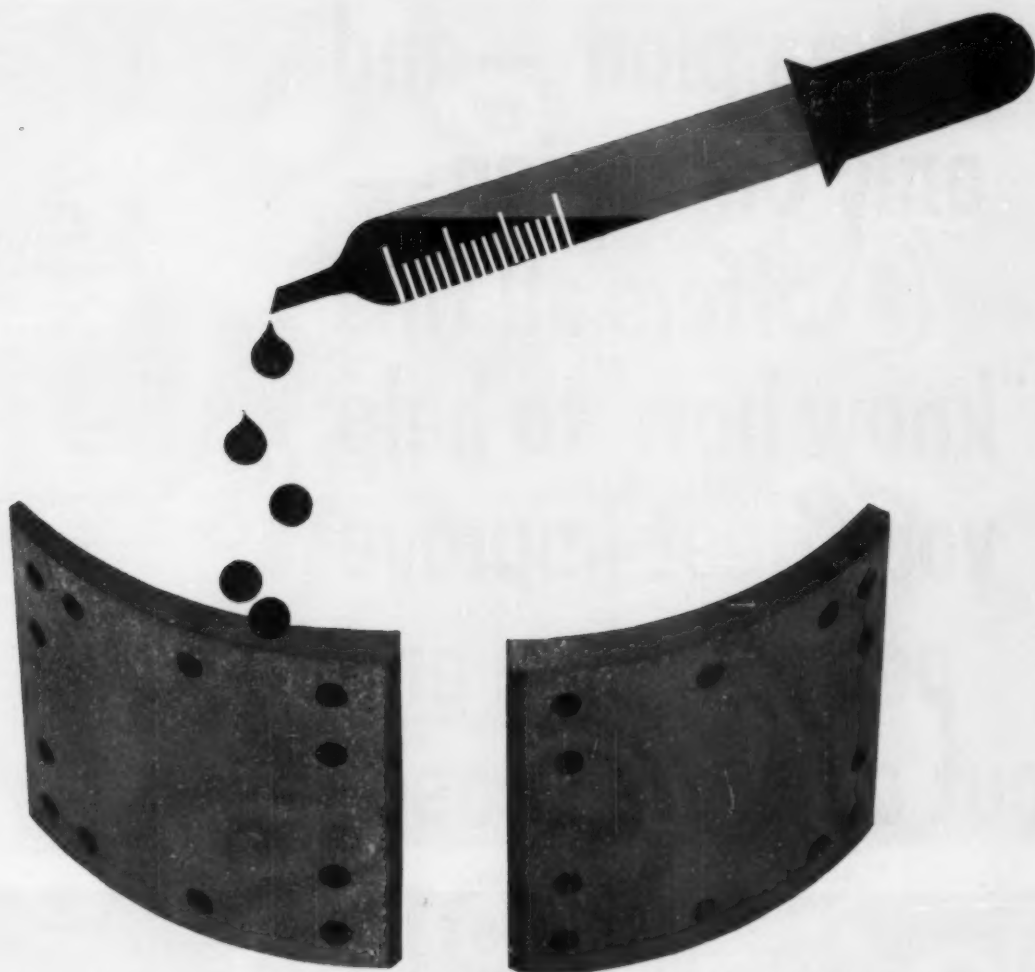
Still too little here



AMERICAN STEEL FOUNDRIES

Producers of ASF and Simplex Cast-Steel 5th Wheels

● More details? Circle 107 on reply card inside back cover



RESINS & PERFORMANCE

BENDIX RESINS BUILD BETTER PERFORMANCE INTO BRAKE LININGS

As part of a rigid quality control program, Bendix manufactures its own resins—one of the few brake lining manufacturers to do so. To meet the varying needs of specialized fleet operation, Bendix combines these resins with other high-quality materials—asbestos, friction modifiers and fillers—in high performance brake linings.

We test thousands of formulas to assure the right combination for each fleet need. Production linings, as well as experimental types, are exhaustively

tested—both in the laboratory, and over the road in our own test fleet.

You can depend on the resulting linings for sure braking, reduced drum wear and increased mileage. Bendix research, manufacturing and testing make sense to the vehicle manufacturers. Proof? *Our brake linings are installed on more new vehicles than any other brand!*

SPECIFY BENDIX® BRAKE LININGS BY BRAND, AND BY TYPE: "ED" truck sets; "EM" or "S-400" brake blocks.



Marshall-Eclipse Division

TROY, NEW YORK

Champion — and only Champion — offers all this "know how" to help your fleet improve performance and cut operating costs

EXCLUSIVE TECHNICAL HELP

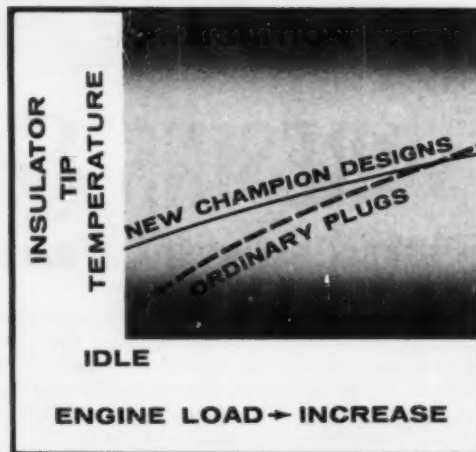
Only Champion brings the latest ignition "know how" right to fleets to help get the best engine performance with the lowest operating costs. Champion field engineers, armed with the latest scientific equipment, pilot these "rolling laboratories" and give on-the-spot help in the correction of ignition troubles.

Your fleet can use this exclusive technical help to boost performance and cut operating costs. Call your Champion Sales Representative or supplier, or write Technical Service Dept., Champion Spark Plug Company, Toledo 1, Ohio.



SERVICE AIDS

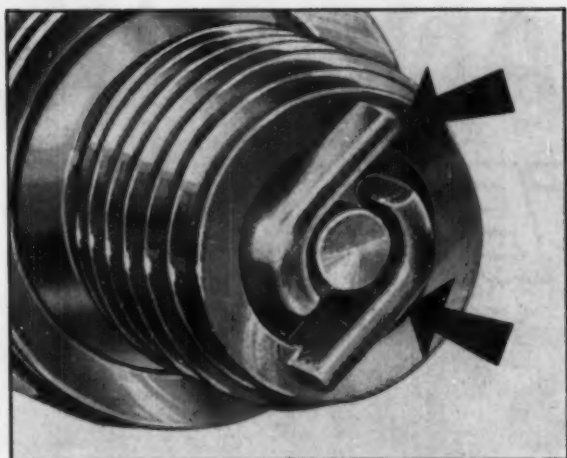
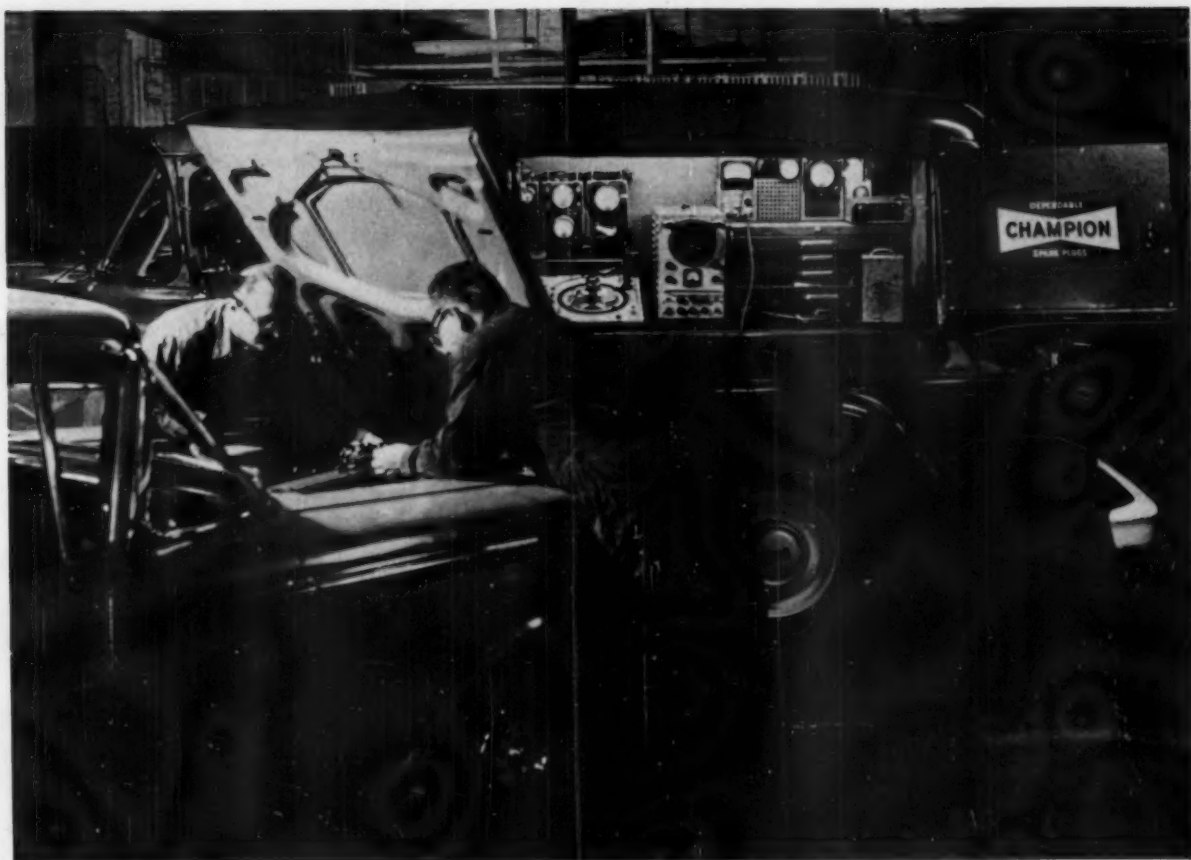
You can cut your labor costs, speed up repairs and prevent unscheduled "downtime" by checking plugs regularly with a Champion Plug-Scope. The Plug-Scope checks plugs right in your engines, eliminating the old "pull-each-plug" method by replacing effort with electronics. Handy and easy to "read," it's designed to help you track down many ignition troubles, too.



WIDER OPERATING RANGE

This graph (above) shows how Champion plug design gives you a wider operating range. Hotter in the low power range to fight fouling, Champions run cooler at peak engine loads—give greater protection against preignition. This is another example of Champion's "know how" in action . . . delivering top spark plug performance under all kinds of driving conditions.

CHAMPION SPARK PLUG COMPANY



SPECIAL APPLICATION PLUGS

Rough, heavy-duty hauling conditions tend to shorten plug life. To help overcome the eroding effect on electrodes caused by these severe operating conditions, Champion has developed a special plug, the J-87B, which has two wrap-around Powerfire electrodes to give better performance longer. Ask your Champion representative about this special plug.

TOLEDO 1, OHIO

COMMERCIAL CAR JOURNAL, January, 1961

CHAMPION

Service Tips

for better engine performance

When using a fuel pump pressure gauge, keep the pressure hose as short as possible, preferably under 12 inches. (Long hoses which drape over fender then run into meter can give erroneous readings . . . and dampen out pump strokes.)

After new fuel pumps are installed, it is a good practice to disconnect line leading into carburetor, then let the first strokes from the pump go into a pail to be discarded. Initial turbulence created by pump is likely to dump foreign particles into fuel bowl of carburetor where it can damage jets, etc. Also it is good practice when installing new carburetors to fill bowl with clean gasoline (by hand); don't use pump to throw fuel into empty new bowl at high turbulence and velocity.



DEPENDABLE

CHAMPION

SPARK PLUGS

● More details? Circle 109 on reply card inside back cover

**INSTALL DELCO-REMY
IGNITION PARTS
TO KEEP FLEET
PERFORMANCE UP,
MAINTENANCE
COSTS DOWN!**



Properly functioning ignition systems in your fleet vehicles can do a lot to cut down-time and keep fleet operations profitable. Regularly scheduled inspections of units can stop emergencies before they start. The distributor, for example, is one of the most important units in the ignition system. Preventive maintenance procedures that regularly search for and replace worn ignition components help insure the dependability of the fleet operation.

For dependable service replace with reliable Delco-Remy parts. They are the *quality* ignition service parts designed for hard working fleet vehicles. They're ready to install and make ignition systems perform like new.

- 1** DELCO-REMY DISTRIBUTOR CAPS are designed and built of highly dielectric, shock and heat resistant materials, and feature voltage-saving internal ribs.
- 2** DELCO-REMY CONTACT SETS are factory-adjusted and aligned for quick, easy installation. Heat-sealed, moisture-proof packages protect contact sets against dirt and oxidation.
- 3** DELCO-REMY ROTORS combine maximum strength with minimum weight and superior balance to assure smooth rotation at slow or turnpike speeds.
- 4** DELCO-REMY CONDENSERS assure correct electrical capacity and resist voltage break-down. Hermetic seal keeps out harmful moisture, oil, and vapors.

Delco-Remy electrical parts are available at car or truck dealers, or through the United Motors System.

Delco-Remy electrical systems



FROM THE HIGHWAY TO THE STARS

DELCO-REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA



Joe Kosokoff, Time Oil's Plant Supt. (right), reviews the mileage record of a new Road-Grip Super Tread with Art Flemmer, Cooper's Seattle Division Rep.

Cooper Road-Grip Super Treads double mileage for Time Oil

Time Oil Co. operates more than 110 hauling units from its Seattle, Washington, headquarters. This fleet consists of stove and diesel rigs, tankers, semi-trailers, flat beds and vans. Capacity loads of gasoline, oil and automotive supplies are moved over some of the toughest mountain terrain in the Pacific northwest. Yearly mileage tops the 2.5 million mark.

Time Oil uses Cooper Road-Grip Super Treads on drive wheels. These specially designed Cooper highway tires have doubled mileage for this operator, averaging 180,000 miles before recapping. This is 90,000 miles more than the conventional drive wheel types previously tried.

79% More Tread Depth

The tread of the new Cooper Road-Grip

is over $\frac{3}{4}$ " deep in the popular fleet sizes, and is made with Cooper's exclusive super mileage Hi-Carbon rubber. Electronically processed Cooper "Hi-T" Du Pont nylon cord and Shock-Guard construction guarantee up to 4 and 5 bonus recaps for even more money-saving mileage.

Extra Safety, Too

Cooper Road-Grip Super Treads deliver more lateral traction to protect against side-slips and jackknifing. And they give drive wheels the extra traction power needed to keep heavy loads moving—even on slick grades, hills, and mountain roads. Call your Cooper dealer for complete details and special low prices. Or write Dept. 118 today. Cooper Tire & Rubber Company, Findlay, Ohio.



... miles ahead

Cooper Tires

Ideas for fleets—Three new terminals



New Detroit Terminal Opens

Great Lakes Express recently began operations at this modern motor-carrier terminal in Detroit. Campbell Engineering Co., Detroit, served as architect and general contractor for the new facility which occupies a 14-acre site at Dequindre and Six Mile Road. The loading dock (shown at left) is 360 ft long, 80 ft wide and accommodates 60 trucks and trailers at one time. Second building (lower right) is a garage and fleet-maintenance building. It's located on the front of the property nearest the highway. All trucks are safety-checked as they leave the terminal grounds by going through maintenance stalls in this building.

New Werner Terminal

Werner Transportation Co., Chicago, recently moved into this new terminal at 57th and Larivee in Forest View. The Chicago terminal occupies eight acres, operates 24 hours a day, six days a week. Facilities include 600 lineal ft of safety lanes for pre-trip safety checks of all vehicles before they are dispatched in over-the-road operations.



Transcon's Atlanta Terminal

Transcon Lines, Los Angeles, Cal., announced recently that construction is underway on their new terminal in

Atlanta, Ga. The \$600,000 facility will occupy a 15.3 acre site in the industrial area of southeast Atlanta.

There will be a fully-equipped maintenance shop in addition to the 74-door terminal.





Bend-Portland Truck Service records show . . .

TIMKEN® BEARING REPLACEMENT COST IS LESS THAN 1% OF TOTAL MAINTENANCE

A REAL trail blazer in Oregon truck transportation, Bend-Portland Truck Service Inc. had its beginnings in 1914 with one truck. Today their 81 trucks and 59 trailers haul general cargo over 1,600,000 miles a year on city, mountain and desert highways. Preventive maintenance and Timken® tapered roller bearings are important factors in holding down their operating costs. Mr. Wilfred E. Jossy, Bend-Portland President says: "Our Timken bearing replacements com-

prise only $\frac{3}{4}$ of 1% of the total dollars spent on *all* maintenance per year."

Thousands of fleet owners save money with Timken bearings. And like Bend-Portland, they buy Timken bearings on price. Not initial price—but *price per mile*. They know it isn't the price you pay for bearings that counts, it's the performance you get.

Timken bearings deliver outstanding performance because we maintain unmatched quality control in their

manufacture from start to finish.

When you need replacement bearings, specify what so many truck manufacturers do on original equipment—Timken tapered roller bearings. And send for free booklet that will help you get the most from your Timken bearings, "Fleet Owner Service Manual." The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO". Canadian Division: Canadian Timken, St. Thomas, Ontario.

**Lowest price per mile . . .
mile after mile after mile**

TIMKEN®
tapered roller bearings



PLYMOUTH FLEET CARS
WITH RUGGED UNIBODY
PAY YOU BACK
AT RESALE TIME!

Whether your fleet numbers five or five hundred, Plymouth offers new beauty, durability and overall economy that's hard to beat. The unique way its Unibody is built and treated practically eliminates rust and rattles. Smooth Torsion-Aire Ride (no extra cost) levels the road. Plymouth's powerful engine, V-8 or 6, runs on regular. At resale time, Plymouth with Unibody and new, long-lasting interior appointments will pay you back a surprisingly high return. Better see or call your nearby Plymouth dealer right now!

61 PLYMOUTH
PUT TOGETHER TO STAY TOGETHER



Detroit fleet saves \$60,471



Trucks that are rolling are trucks that are earning. Mobil studied operating conditions and PM practices at Motor Truck Services . . . recommended service intervals which eliminated 455 hours of shop time on Diesel tractors. Motor Truck gained \$2,459 in revenue because of greater vehicle availability.



Program

with Mobil Program

**Motor Truck Services cuts operating costs on units leased to Kramer Bros. . . .
saves enough for 5 new tractors or over 250,000 gallons of fuel**

Motor Truck Services, Inc., Detroit, leases 120 Diesel tractors to Kramer Bros. Freight Lines . . . provides fuel, lubricants and maintenance for this rapidly growing fleet. To help widen the gap between income and operating costs, Motor Truck installed a Mobil Program in 1957.

Mobil engineers, cooperating with Motor Truck personnel, studied the requirements of these long-haul units . . . recommended quality Mobil products to assure maximum protection. Then, through periodic analyses of used lubricants and

inspections of lubricated parts, they determined optimum change and inspection intervals for greatest economy and safe operation. Storage and handling procedures were improved as well. As a result of the Mobil Program, Motor Truck Services has saved \$60,471 over a two-year period.

The Mobil Program can work for you wherever fuels and lubricants are used . . . in industry, in transportation, in construction. To learn more about this unique approach to maintenance procedures, call your nearest Mobil representative.

MOBIL OIL COMPANY

150 East 42nd Street, New York 17, N. Y.



Periodic analyses of used crankcase oil, plus regular inspection of lubricated parts, helped Motor Truck increase over-all service efficiency and eliminate the need for additional shop space. Savings in rental expense: \$12,000.



Material and labor costs for oil and filter changes were drastically reduced with the introduction of quality Mobil lubricants and the determination of optimum change intervals. These savings to Motor Truck totaled \$18,757 in just two years.

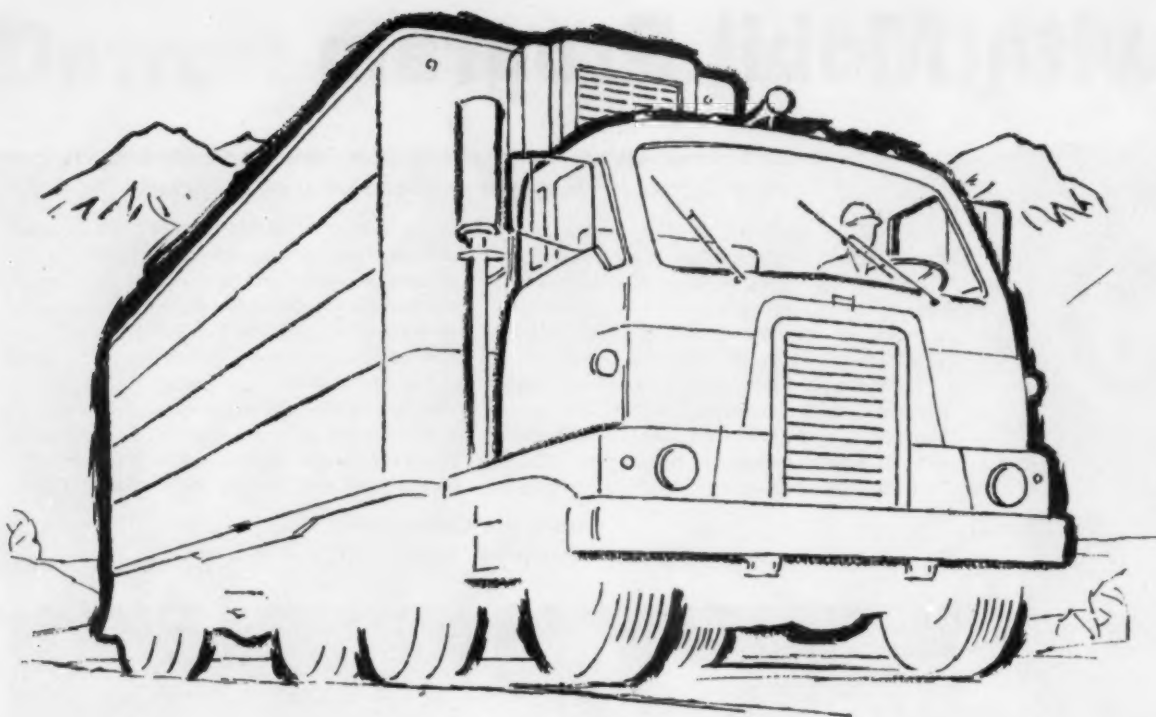


Lubrication of "fifth wheels" and other chassis parts was improved with a heavy-duty Mobil grease and a regular inspection routine. Motor Truck saved \$24,615 in labor and materials.



Mobil studied lubricant storage, handling and dispensing techniques at customer's shop . . . recommended improved procedures which saved Motor Truck \$2,640 in two years.

for Fleets



DYNAMIC DIESEL DRIVES with Rockford Spring-Loaded Clutches

Get maximum power from your diesel engines with Rockford Clutches. Cut costs of downtime, replacement and labor. Up to 1/32" more facing thickness gives extra long clutch life. Minimum inertias prevent gear clashing and delayed shifting. Rockford's vibration-free clutches offer smoother engagements through dynamic and static balancing. Rotary surface grinding assures uniform thickness of clutch components. Quality construction is Rockford's key to rugged clutch service. Rockford Clutch offers an ultra-wide range of power controls for all industries. Write today for illustrated brochure.



SEE US AT
COBO HALL
JAN. 9TH TO
13TH

ROCKFORD CLUTCH

1335 EIGHTEENTH AVE. ROCKFORD, ILLINOIS

Export Sales Borg-Warner International • 36 So. Wabash, Chicago, Ill.



DIVISION
OF BORG-
WARNER

How 3 National Fleets save Time and Money

with the **WATSON** **Hide-A-Gate**

HIDE-A-GATE is the powered elevating tailgate that hides away under the bed when not in use. It gives you these important advantages:

1. You can back up tight against a dock
2. You don't have to lower the gate to open van doors
3. It's easier to park in tight spots—no gate overhang or projections.

And, of course, you get all the advantages of a fast, safe, reliable power gate for ground or curbside loading—at a touch of the control lever.



SHERWIN-WILLIAMS CO. find parking much easier on store deliveries with Hide-A-Gate—it folds under the bed with no overhang or projections until ready for use.



PACIFIC INTERMOUNTAIN EXPRESS shows here how easy it is to dock load with a Hide-A-Gate. No need to lower the gate to open doors, or to run fork lifts over the gate platform—just back in tight to the dock and load or unload.



CONSOLIDATED FREIGHTWAYS' Hide-A-Gate gives this new van the advantage of power gate for ground or curbside loading—yet no gate interference when dock loading.

Hide-A-Gate handles loads to 1,200 lbs., is easy to install on 1 ½ ton and and larger trucks. Electro-hydraulic (6v or 12v) and power take-off models available. Why not get the facts now—write for literature, prices. Dept. 18.

H. S. WATSON CO.

1316 67TH STREET
EMERYVILLE, CALIFORNIA
1606 LASKEY ROAD
TOLEDO 12, OHIO

WATSON

22

Here's why G-E rough-service headlamps take a real beating and still give twice the light where it is needed



New G-E rough-service headlamps
(#6013 for 2-headlamp trucks,
#4005 for the new 4-head-
lamp systems) have three
special features that make them
able to withstand rough treatment.

1. Separate Rod—grips the filament shield, never touches lead-in wires, keeps shield vibration away from filaments, ends premature failure. Shield blocks upward light, helps drivers see in any weather.

2. Low Temperature Filaments
provide greater mechanical strength and fewer lamp failures under rough road conditions.

3. Ceramic Shock Absorber
subdues most vibration, causes lead-in wires to move together rather than independently—so filaments and the beams won't be distorted.

And these lamps give twice as much light in the low beam down the right side of the road as any previous heavy-duty headlamp. They provide this "spotlight" effect because their low beam filaments are on focus. General Electric Co., Miniature Lamp Dept. M-110, Nela Park, Cleveland 12, Ohio.

Progress Is Our Most Important Product

GENERAL  ELECTRIC

HOMESTEAD'S MULTI-JOB WASHER SAVES TRUCKING FIRM \$18 A DAY!



Cuts cleaning time by 42 hours a week

Homestead's Multi-Job Washer paid for itself in a little over three weeks at the Tallant Transfer Co., Hickory, N. C.

Working on Tallant's 158-unit fleet that operates in 27 states, the Multi-Job Washer is credited by Maintenance Superintendent Howard Tallant as saving them \$18 a day, six days a week. Since it cost only \$325, the Multi-Job Washer actually paid for itself in a little over three weeks.

How?

By washing seven trailers a day instead of the former hand-washed four. By eliminating the ex-

pense of having wash jobs done off the Tallant lot. And by cutting 42 hours a week off former cleaning time. "Our fleet," says Mr. Tallant, "looks 100% better."

To find out how the heat-cleaning of Homestead's Multi-Job Washer can save you money, time, and turn out better looking wash jobs, mail coupon below.



HOMESTEAD VALVE MANUFACTURING COMPANY
Hypressure Jenny Division, Coraopolis, Pa.

(In Canada: Hypressure Jenny Sales & Service, Ltd.,
517 Jarvis St., Toronto 5, Ontario. C.S.A. Approved)

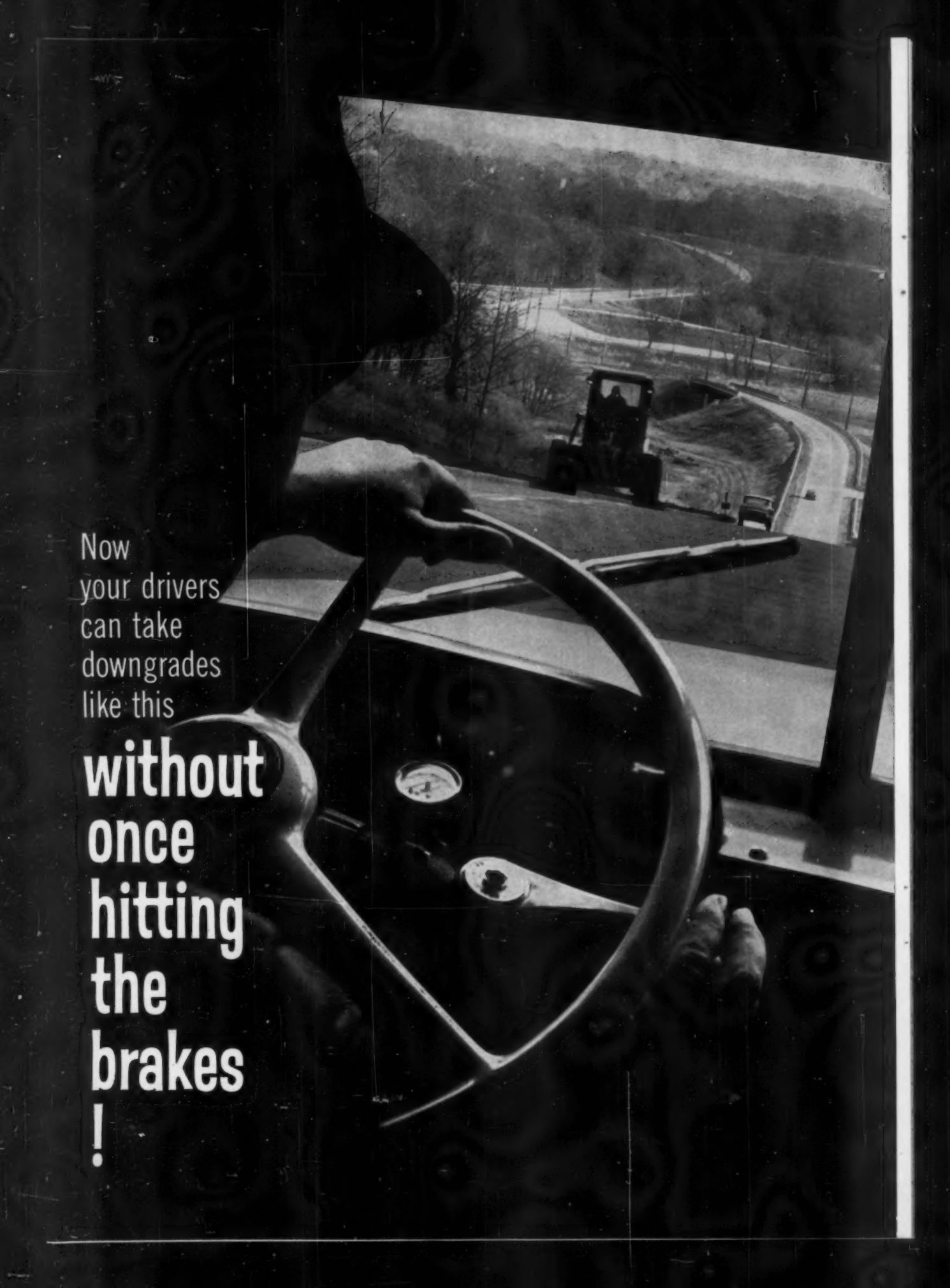
Please send me full information on Homestead's Multi-Job Washer.

Name.....Position.....

Company.....

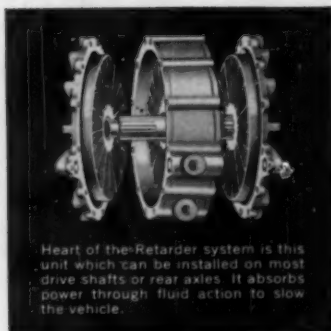
Address.....

City.....Zone.....State.....



Now
your drivers
can take
downgrades
like this

**without
once
hitting
the
brakes
!**



New THOMPSON RETARDER smothers speed to save wear and tear on brakes, tires, bearings and engine; cut trip time.

The driver needs to keep full control of this heavily loaded truck on the long downgrade. He turns the hand control valve of the Thompson Retarder. The Retarder smoothly slows the truck to a safe speed and holds it there all the way down. Descent is made at a *higher* average speed . . . say 25 MPH rather than 15 MPH. There's no danger of brake "fade" . . . or the nightmare of a "runaway". Brakes stay cool, efficient—ready to stop quickly if needed.

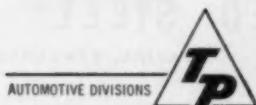
Or the truck's approaching a stop sign. Again the driver turns the valve of the Thompson Retarder. When he finally does apply the brakes to stop, he's traveling at a slow speed, eliminating the wear and tear of high-speed braking.

Men now using the Thompson Retarder can give you dozens of reasons why they wouldn't be without it on their trucks. It cuts trip time because faster speeds can be safely held on downgrades. There's less driver fatigue. Brake maintenance costs are reduced substantially . . . as much as 75% in some cases on record. Tires and wheel bearings last much longer. Optimum engine temperature is maintained, thereby prolonging engine life.

The Thompson Retarder is low cost, lightweight. You can order it as optional equipment on your new trucks, or have it installed on your older models. It can mean real savings in your operating costs.

WRITE FOR 16-PAGE ILLUSTRATED BOOKLET

For complete information on the new Thompson Retarder, write now for a copy of our 16-page descriptive booklet. Write Dept. CC-1, Thompson Products Michigan Division, Thompson Ramo Wooldridge Inc., 34201 Van Dyke Avenue, Warren, Michigan.



AUTOMOTIVE DIVISIONS

THOMPSON PRODUCTS MICHIGAN DIVISION

Thompson Ramo Wooldridge Inc. • 34201 Van Dyke Ave. Warren, Michigan

THOMPSON PRODUCTS
LIGHT METALS
DIVISION

THOMPSON PRODUCTS
MICHIGAN DIVISION

THOMPSON PRODUCTS
VALVE DIVISION

THOMPSON PRODUCTS
RAMCO DIVISION

THOMPSON PRODUCTS
MOTOR EQUIPMENT
MANUFACTURING DIVISION

● More details? Circle 120 on reply card inside back cover



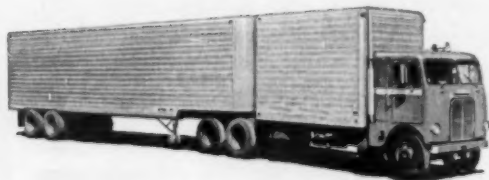
Specify Parish Truck Siderails For Longer Vehicle Life, Lower Upkeep!

Remember—you can *specify* the make and type of frame in the new trucks you order . . . so be sure to ask for Parish alloy steel siderails and get greater efficiency at less cost per mile!

Parish siderails are made of heat-treated, Dana-Loy 110 steel, are 277% stronger than ordinary carbon steel siderails. They're designed and built to stay

straight and strong under capacity loads and uneven terrain, hence protect the vehicle against costly misalignment.

Your truck lasts longer, performs better, and costs you less to operate when it's equipped with Parish siderails. They're available through some 30 truck and trailer manufacturers—so, specify Parish siderails next time you order new equipment.



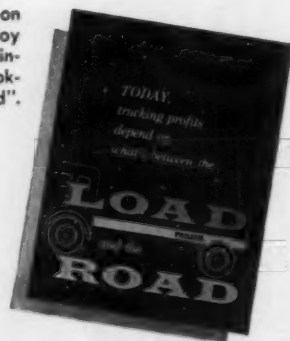
For the complete story on Parish heat-treated alloy siderails, write for the interesting, illustrated booklet—"Load and the Road".



PARISH

PRESSED STEEL

DIVISION OF DANA CORPORATION • READING, PENNSYLVANIA





BUTYL HERE...

MEANS LONGER WEAR HERE!

BUTYL INNER TUBES

Preserve tire casings, permit more retreads

More and more truck operators are finding it pays to install a *new* Butyl tube in every *new* and re-treaded tire they mount.

They figure this way: Tubes are relatively inexpensive and a *new* tube conforms perfectly to the shape of the tire casing. This means truer running, more even

tread wear, *more retreads*. And since Butyl tubes hold air eight times better than natural rubber, constant correct air pressure reduces tire wear. *Result*: Increased tire mileage for a very small investment.

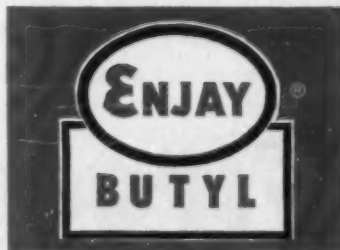
See your tire supplier for money-saving Butyl tubes. Enjay does not

make tubes but supplies Butyl rubber to leading tire and tube manufacturers. For more information, write to: 15 West 51st Street, New York 19, N. Y.

EXCITING NEW PRODUCTS THROUGH PETRO-CHEMISTRY

ENJAY CHEMICAL COMPANY

A DIVISION OF HUMBLE OIL & REFINING COMPANY



EVERYTHING YOU LOOK FOR IN A REALLY GOOD TRUCK- BUS BATTERY



...AT LOWEST COST!

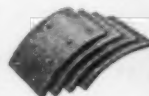
Firestone batteries match the highest-quality standards for power output and dependability. Firestone brings you all the features you look for in a really good battery—and low-cost-per-unit savings, too. Count on Firestone for power—for power ratings that equal or exceed S.A.E. and A.A.B.M. specifications. Count on Firestone for long-life durability, with shock-fortified rubber cases and terminal-post bushings. Count on Firestone for every built-in battery feature important to efficient truck-bus fleet operations today. For full details and prices of Firestone truck-bus batteries and other outstanding accessories, see your Firestone representative. Or, write The Firestone Tire & Rubber Co., Akron, Ohio.

Copyright 1961, The Firestone Tire & Rubber Company
Tune in Eyewitness to History every Friday evening, CBS Television Network

GO

Firestone

ALL THE WAY WITH ... BATTERIES



BRAKE LINING



TIRES



SPARK PLUGS

94

● More details? Circle 164 on reply card inside back cover

● More details? Circle 123 on reply card inside back cover →



BARTLETT

"PIGGY BACK"

M-59

**PIONEER
and LEADER**

SAVE ACCIDENTS and
Physical Injuries — ELIMI-
NATE BACK BREAKING
CRANKING



OPTIONAL —
All Air Cab Controls

**COMPLETELY
CAB CONTROLLED**

HYDRAULIC 5TH WHEEL
IF YOU OPERATE 25 or MORE TRAILERS...
THIS SPOTTING 5TH WHEEL IS A MUST!
WILL PAY FOR ITSELF IN A VERY SHORT TIME.

LOCKS AUTOMATICALLY — UNLOCKS BY AIR.

INCLUDES FRAME RAILS... HEAVY DUTY FIFTH WHEEL...
POWER-TAKE-OFF AND CONTROLS. NOT A MAKE SHIFT
ASSEMBLY.

STURDIEST ASSEMBLY BUILT... REINFORCED TO TAKE PUN-
ISHMENT.

SHIPPED COMPLETE — READY TO INSTALL ON TRUCK FRAME.

USERS include Truckers and Private Carriers from Coast to Coast,
Canada, Hawaii, Puerto Rico, Venezuela, Sweden and England.
Check with a user in your area on the Bartlett Quality and the
Savings Possible.

BARTLETT TRAILER CORPORATION

3080 ARCHER AVENUE

CHICAGO 8 • ILLINOIS

Virginia 7-1160

MORE FLEETS USE BARTLETT 5th WHEELS THAN ANY OTHER



Laugh it off

Maintenance Superintendent: "Marry my daughter? My boy, do you realize she is only a girl?"

Automotive Parts Clerk: "I know that, sir. You see, that's one of my reasons for wanting to marry her."

001

The shop roustabout was making his first visit to a hospital where his teenage son was about to undergo an operation. Watching the doctor's every move, he asked, "What's that?"

The doctor explained, "This is an anesthetic, after he gets this he won't know a thing."

"Save your time, Doc," exclaimed the greasemonkey, "he don't know anything now!"

002

Terminal Manager's Wife: "Hurry up, please, and give me a quart of red oil."

Service Station Attendant: "A quart of red oil?"

Terminal Manager's Wife: "Yes, of course. Can't you see my tail light has gone out?"

003

The truck mechanic's bossy wife was giving him a briefing on things he couldn't do at the party they were about to attend. His question was: "Well, dear, then what can I do at the party?"

She replied: "When they pass the food, say you're not hungry—when they pass the drinks, say you're not thirsty . . ."

He cut-in with: "OK, sugar, but when the girls pass, can I ad lib?"

Tanker Driver: "I WENT OUT WITH A NEW GIRL LAST NIGHT."

LINE DISPATCHER: "YEAH? WHAT'S SHE LIKE?"

Tanker Driver: "EVERYTHING . . . FILET MIGNON, LOBSTER, STRAWBERRY SHORTCAKE, CHAMPAGNE . . . EVERYTHING!"

004

Freight Checker: "My wife has the worst habit of staying up until two and three o'clock in the morning, and I can't break her of it."

Dock Foreman: "What is she doing all that time?"

Freight Checker: "Waiting for me to come home."

— "Cici Jay" —



"Wanta see a cute snap of the boss and me at the company picnic?"

The Dynamometer Specialist was going with a girl he wanted to marry. So he went to her father for an interview.

Father: "Do you know I've heard a lot of bad tales on truck mechanics, so there's something I want to clear up. Do you drink anything?"

Dynamometer Specialist: "Oh, no, sir, only alcoholic beverages."

005

Sweet Patootie: "Dear boy, do you realize that a girl's physical charm is her greatest asset in the 'battle of the sexes'?"

Diesel Mechanic: "Well, there's one thing that's certain . . . you can't be accused of carrying 'concealed weapons'!"

006

ROAD TRUCK DRIVER: "HONEY-BUNCH, JUST TELL ME THREE LITTLE WORDS THAT'LL SEND ME STRAIGHT TO HEAVEN!"

CLEVER CUTIE: "GO SHOOT YOURSELF!"

007

Diesel Mechanic: "Here, you can just take this stuff back and refund my money. It won't work."

Druggist: "What in the world are you talking about?"

Diesel Mechanic: "I'm talking about this vanishing cream. I rubbed it all over my wife's mouth, but it's still there."

Resume Work

GO STAINLESS/for a Versatile Fleet

Stainless Steel Tankers Give You Unmatched Versatility Plus These Money-Making Bonuses

In addition to giving your fleet the ability to haul a much greater variety of loads, stainless steel tankers also give you these profit-boosting bonuses:



1. Fast, easy cleaning. Check with any dispatcher who has had experience with stainless tank trucks. He'll confirm the fact that stainless tankers are not only easier to clean contaminant-free, but are in and out of the cleaning rack in a hurry.



2. No cargo contamination. Stainless steel's excellent corrosion resistance and hard, smooth surface eliminate contamination of cargoes. Customers can easily inspect your tankers. You deliver material of the same purity as you loaded.



3. Less maintenance expense. Besides resisting discoloration and corrosion, high strength stainless steel takes years of rough service with impunity. Maintenance costs are so low that some fleet owners report net savings on this stainless bonus alone.



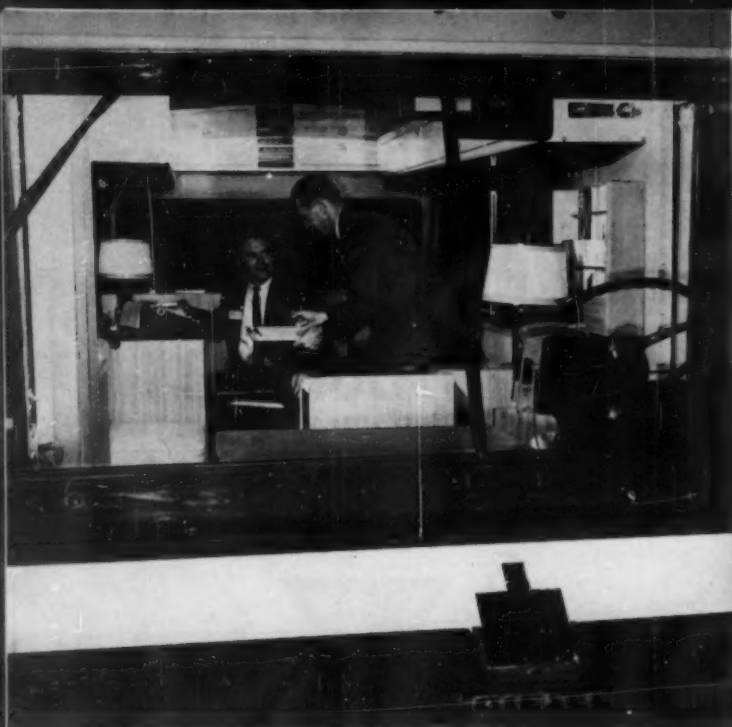
Let Stainless Work for You

With tank trucks made of Armco Stainless Steel, you can turn all these advantages into better profits. Multi-purpose stainless tankers will help you increase and diversify your business—help cut your fleet's operating costs. For more information on stainless steel and its advantages in truck transportation, just write Armco Steel Corporation, 2810 Curtis Street, Middletown, Ohio.

ARMCO STEEL



Armco Division • Sheffield Division • The National Supply Company • Armco Drainage & Metal Products, Inc. • The Armco International Corporation • Union Wire Rope Corporation



LOOKING AFT: Editor Bart Rawson, at typewriter, checks a point with Technical Editor Ed Shea in the truck's "built-for-a-bank" lounge



LOOKING FORWARD: One of the 216 visitors logged-in during the 5000-mile shakedown cruise gets briefed on what mobile office can do

SPECIAL TRUCK for



**CCJ's new mobile editorial office
couples many engineering firsts
with unique facilities
to help us gather the best in
fleet reports for you**

▼ **COMMERCIAL CAR JOURNAL's** 1961-model Mobile Editorial Office is just back from a 5000-mile shakedown cruise. The trip was fast and furious but fantastically successful. For right off the bat it . . .

- Reconfirmed our 3-year experience that such a vehicle is of real value, simply because it helps us get better coverage of fleet ideas for you, and . . .
- Proved that *this* vehicle, with its radically new engineering features, is a roadworthy "honey."

Along with the 5000 miles, we attended two shows, made 24 calls on fleets and manufacturers, logged-in 216 visitors, completed one major and two smaller articles, laid good groundwork for many more.

It's also a fitting time to launch a new model. This is CCJ's 50th anniversary of serving the



AT DENVER: Ringsby Executive Vice President Gail Crawford, next to truck, visits editorial team (from left): Shea, Jim Winsor, Rawson

special job

fleet industry. Since 1911 we have visited and revisited readers in all 50 states. We've traveled by air, land and sea, and we intend to keep right on doing so.

But we also realized that sometimes a guy needs a perch . . . a base of operations for a more detailed look at an important fleet or a major convention. That's when we hatched two ideas at once—the big story concept and the mobile office.

In the spring of '58 we picked up a used truck—a Boyertown "Tourwagon"—and a good one. Soon the "big stories" started to roll . . . McLean, TVA, Kroger, Superior, Adley, Ryder. And along with them a lot of just plain good ones, *made possible* because we weren't flying over-head!

We picked up other things as well. The problems of state "Ports of Entry," for instance, and



AT KANSAS CITY: KC Power & Light Co.'s Fleet Superintendent Chet Harrison (center) checks new truck before taking the team through his new shop

AT HODGKINS (near Chicago): Olson Transportation's Vice Pres. J. A. Ebeling bids von voyage to Rawson after a tour of new, ultra-modern terminal



SPECIAL TRUCK

Continued

Basic specs . . .

Body: Metrolite 12-ft aluminum, magnesium and plastic—with great modification.

Chassis: International Harvester AM-152 with 134-in. wheelbase.

Engine: International D-301 diesel—6 cyl, 301-cu in. displacement, 110 hp @ 3000 rpm, 230 lb ft of torque @ 1600 rpm, No. 2 diesel fuel, Roosa Master injection pump.

Transmission: Warner 4-speed.

Rear axle: Eaton 1350 2-speed (4.5 and 6.25 ratios) with electric shift.

Tires: 7:00-17, 8-ply.

Electrical system: 12-volt with Delco-Remy starter, alternator and fully-transistorized regulator.

Maximum GVW: 11,000 lb.

Under-construction view shows how frame was dropped at rear to provide king-size storage



NEXT MONTH: A big story on Denver Chicago's fleet including pretty Sue Anderson's boss, Johnny Dee, coach of DC basketball team

a behind-the-wheel look at how the folks we were writing about showed-up on the road.

There was an unexpected bonus too. The "office" became our 4-ton calling card . . . immediate and positive identification wherever we went . . . our "open sesame" to front offices and out-back shops alike.

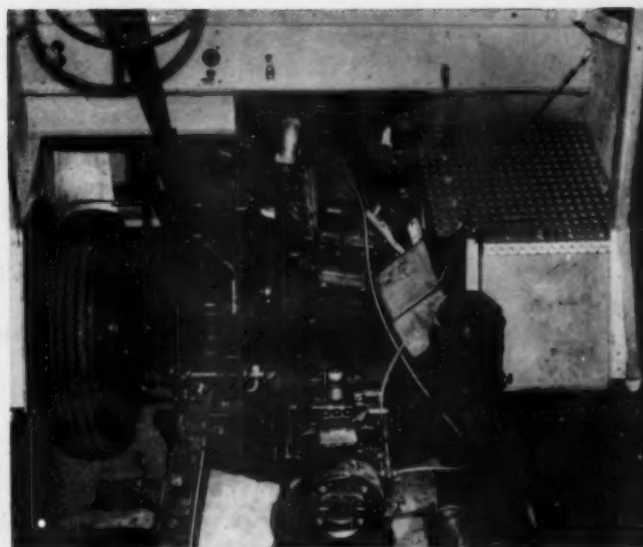
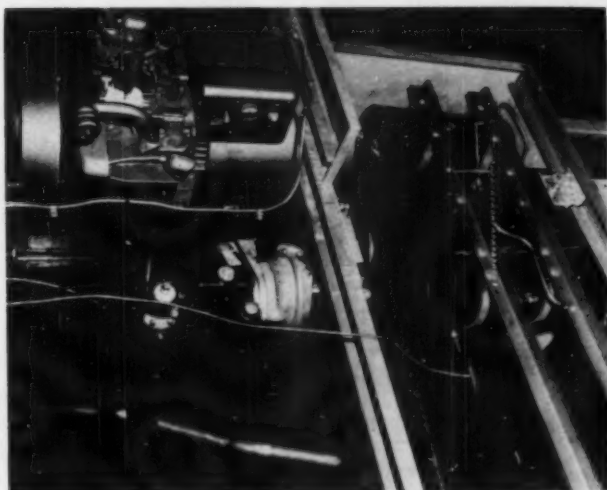
With success assured, the inevitable happened. As we traveled, we planned—just as every fleetman does. We wanted something better, something more efficient and, for our particular needs, something special.

Besides all that, the faithful beast was aging. It had traveled more than 50,000 miles, logged-in more than 1000 visitors, made countless fleet calls and conventions.

So, last spring we went shopping with dream specs in hand. It wasn't an easy task. We contacted every chassis builder, a host of other suppliers.

We wanted a diesel engine, a drop frame section behind a two-speed rear, a 5 KW generator, big picture windows, good appearance, light weight, air brakes, auxiliary air suspension, running water and a gold band on the side to symbolize our 50th anniversary.

5 KW Onan generator fits under left side. Also note air brake chamber on master cylinder



Here's how the compact 110-hp diesel engine fits in Metrolite's front cowling and chassis

We got them *all* from International Harvester, with some major assists from component and parts suppliers. Early in September, the most *highly modified* "Metrolite" ever to confound Metropolitan Body Co.'s special products section, rolled off "the line." Symbolic of the pride of workmanship, a craftsman had scribbled a sign: "Rolls-Royce Division, Metropolitan Body Co."

Actually the only thing standard was the AM 150 chassis—less engine, rear axle, transmission, drive shaft, some of the springs and part of the frame.

Someday we're going to get Ed Shea, our project director, and Joe Calcaterra, Metro's project engineer, to compile a book on just what happened between the drawing board and final blast-off. It would be long, but fascinating. Some of the chapter headings might read . . .

- The diesel that wouldn't bracket.
- The case of the backward generator.
- The left-right, too-big fuel tank.
- The exhaust pipe with no place to go.
- How to handle the "outside expert."

And many more. Point is, to the everlasting

credit of all concerned, the special monster did evolve, did roll to Philadelphia, there to create a whole new set of chapter titles, such as . . .

- Color formulas and the ladies auxiliary.
- A "banker" builds the interior.
- The telephone aerial with no place to go.
- How to find a rear-end ratio that aint.
- Black Sunday and the air suspension.
- How to stay almost sane.

Somehow all those things happened too. And on Oct. 21, we hit the road. Perhaps a bit prophetic . . . our first stop . . . Mars (Pa.)!

One thing for sure: Next time somebody talks about designing a special truck for a special job, we'll lend a more understanding ear.

Be it recorded that COMMERCIAL CAR JOURNAL has a substantial investment in its new Mobile Office. But so elaborate a project would have been doomed to failure without technical and material help from a large list of suppliers. It would be nice if the list could include *all* our friends and advertisers. But, as in all such cases, that obviously would be impossible.

(TURN TO PAGE 152, PLEASE)



One way to make your PM program a success is through a *careful inspection* system. To get that . . .

Darling Freight adds “HOW” to “what” in PM checks

WANT TO get better results from PM inspections? Try telling your mechanics “how” to inspect each item, rather than giving them a basic list of “what” to check.

“How,” in this case, means the addition of the operating standard to be met by each “what” on the checklist. For example: Instead of saying “check batter eylectrolyte level,” say, “Battery

electrolyte level to be minimum of $\frac{3}{8}$ in. above plates.”

Such inspection instructions plus a color-coded PM system are paying-off for Darling Freight, Inc., Grand Rapids, Mich.

Darling has 21 Mack diesels in over-the-road service. The fleet also includes 20 Internationals, 27 Reos, and miscellaneous units.

Darling spots troubles with driver “gripe” sheets plus

June 1960
Revision

DRIVER'S EQUIPMENT REPORT
This report turned in with my trip report at _____
Date _____ Signed _____ (Driver)

XX
(Put hand on all hubs ☐) TRACTOR NO. _____ (Company Tractors Only)

UNIT IS O.K. ☐ UNIT IS NOT O.K. ☐

explain trouble clearly: _____

Repaired at _____ by _____ Date _____
Shop U. C. ☐ Outside P. O. ☐ No. _____
XX
(Put hand on all hubs ☐) (Driver) TRAILER NO. _____

. . . three PM checks. First is Red. It alternates with the

RED Page _____ UNIT NO. _____

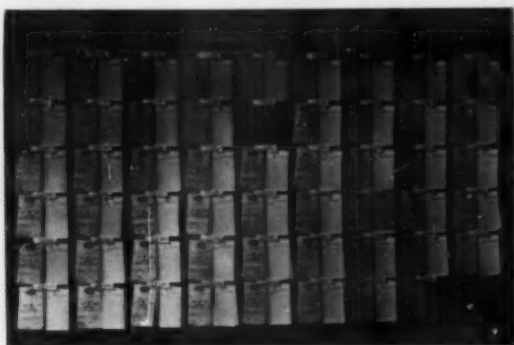
Mechanic _____ Code _____ Unit _____
Mechanic _____ Code _____ Date _____
Mechanic _____ Code _____ Speed _____
Miles Since Last Insp. _____
Next inspection will be RED ☐ BLUE ☐ GREEN ☐ speed _____

RED Date _____
Mechanic _____ Code _____
Mechanic _____ Code _____
Mechanic _____ Code _____
Miles Since Last Insp. _____
Next inspection will be RED ☐ BLUE ☐ GREEN ☐ speed _____

Item Left O.K.	Item Needs Furth. Att.	Code	Item Completed Date
RED 1. a.			
b.			
c.			
d.			

On _____

DATE INSPECTED _____
AT MILEAGE _____
NEXT INSP. DUE _____



One of two large-size control boards used by Darling to keep vehicle PM and service records readily available. Forms show what has been done, what's to be done and at what mileage

The preventive maintenance program, like that of many other fleets, has three intervals. As you see on the inspection forms shown below, the fleet refers to these as its Red, Blue and Green inspections.

For the diesels, Red and Blue inspections alternate at 4000-mile intervals. There's a Green inspection at 32,000-mile intervals.

Gasoline units get Red and Blue inspections at 3000-mile intervals, with the Green inspection at 30,000 miles.

Oil drain interval is 8000 miles for diesels and 3000 miles for gasoline rigs. Filters are changed with each oil change.

Red, blue and green

Step-by-step instructions have been spelled out for inspectors. These are on colored sheets

which correspond to each inspection. Each page is mounted in a plastic cover. All are kept in binders.

Working from these instructions, the mechanic records his progress on an inspection sheet of similar color (illustrated below). These sheets are signed by the mechanic and his foreman when the job's done.

To save time, the mechanic only has to run a continuous line through his assigned items rather than initial each one. Completed check sheets are then filed in individual jackets for each rig.

Small colored slips are made out after each inspection. They show the date and mileage of the completed inspection, and when the next one is due. Posted on the vehicle's hook on one of the fleet's two control boards, they show a rig's PM status at a glance.

The second control board carries copies of fuel tickets for each rig. A glance at the odometer reading on each ticket is all that's needed to spot units due for inspection.

(TURN TO PAGE 188, PLEASE)

... more extensive Blue check.
After about 5 of each, it's

BLUE			UNIT NO.
Mechanic	Code	Unit	DATE
Mechanic	Code	Date	INSPECTED
Mechanic	Code	Speed	AT MILEAGE
Next	Miles Since Last Insp.		NEXT INSP. DUE
Next inspection will be RED <input type="checkbox"/> BLUE <input type="checkbox"/> GREEN <input type="checkbox"/> at speed.			
Mechanic	Code	Unit No.	Page 1 of 3
Mechanic	Code	Date	
Mechanic	Code	Speed	
Next inspection will be RED <input type="checkbox"/> BLUE <input type="checkbox"/> GREEN <input type="checkbox"/> at speed.			
Item	Item		

... time for the comprehensive
Green. Tabs show next PM due

GREEN			UNIT NO.
Mechanic	Code	Unit	DATE
Mechanic	Code	Date	INSPECTED
Mechanic	Code	Speed	AT MILEAGE
Next	Miles Since Last Insp.		NEXT INSP. DUE
Next inspection will be RED <input type="checkbox"/> BLUE <input type="checkbox"/> GREEN <input type="checkbox"/> at speed.			
Mechanic	Code	Unit No.	Page 1 of 4
Mechanic	Code	Date	
Mechanic	Code	Speed	
Next inspection will be RED <input type="checkbox"/> BLUE <input type="checkbox"/> GREEN <input type="checkbox"/> at speed.			
Item	Item		



Before making any deliveries, new Sun Oil rigs get a full 79-item pre-service check

COD

(CHECK ON DELIVERY) means long life
for Sun Oil rigs

We start maintenance "before vehicles enter service . . . following procedures which we have found absolutely necessary . . ."

By Fred Hague, *manager, Motor Transport Dept.*
Sun Oil Co.

PREVENTIVE MAINTENANCE does not begin after equipment has put in one or two thousand miles of operation. The time to start maintenance is before vehicles enter service.

Before placing them in service we find that new vehicles have accumulated, for one reason or another, several hundred miles of highway travel. For this reason we have a checklist of more than 50 items on tractors and 29 items on trailers which our maintenance staff must do before releasing new units to the Delivery Dept. These are listed on the page at right. The actual items included change as the design of components change.

We have found that when we have tried to eliminate any of the items, the resulting road failures have proved to be more expensive than

the cost of preventing them. Importantly, we often find during the checks other deficiencies that would otherwise go unnoticed.

There's another important reason. Unless we as an industry scrupulously employ a PM procedure tailored to our particular type of operation and needs, we will find ourselves engulfed—and rightly so—by federal and state regulations.

I think you have seen some evidence of this trend in the last few years. Note the increased activities of the ICC, the more extensive safety checks. Now, too, many states are contemplating adopting the ICC regulations and applying them on a local basis.

You might quarrel with our practice of removing all wheels to examine brake linings, brake

(TURN TO FOLLOWING PAGE, PLEASE)

Tighten . . . Check . . . Adjust

Thorough inspection of newly-purchased tractors and trailers—before they go into service—is the starting point of Sun Oil Co.'s preventive maintenance program. Based on Sun's "New Unit Service Sheets," here's a run-down on what the fleet maintenance staff does before releasing new units.

NEW TANK TRAILERS

Tighten all . . .

- ☐ Dome and manhole covers—check-out all linkage
- ☐ Catwalk and ladder bolts and nuts
- ☐ Chassis bolts, nuts, hangers, brackets, etc.
- ☐ Upper fifth-wheel bolts, nuts and studs
- ☐ Cargo line flanges, hangers and brackets
- ☐ Side compartment door locks and rods
- ☐ Side compartment braces, etc.
- ☐ Chassis spring U bolts and clips
- ☐ Axle and spring hanger bolts

Remove all trailer wheels and . . .

- ☐ Examine linings—lubricate anchors and cams
- ☐ Tighten all drums to wheel bolts
- ☐ Check drum trueness with dial gage (max. 0.010)
- ☐ Grind linings to drum size
- ☐ Clean and pack all wheel bearings and inspect oil seals

Install wheels and then . . .

- ☐ Adjust wheel bearings
- ☐ Tighten all wheel tire lugs
- ☐ Tighten all air lines, diaphragms, valves, etc.
- ☐ Check for air leaks
- ☐ Check operation of emergency relay valve
- ☐ Adjust trailer brakes

And then . . .

- ☐ Check operation of all body and compartment lights
- ☐ Install a can of safety chains in side compartments
- ☐ Install fire extinguisher
- ☐ Lubricate complete unit
- ☐ Lubricate tank valve control cables, door cover hinges, etc.
- ☐ Install springs on all compartment door lock rods
- ☐ Wash and clean complete unit

NEW TRACTORS

Tighten all . . .

- ☐ Cylinder head nuts—using tension indicator
- ☐ Manifold and exhaust pipe nuts and studs
- ☐ Upper crankcase bolts and nuts
- ☐ Oil pan bolts and nuts
- ☐ Engine mounting bolts and nuts
- ☐ Water hose connections
- ☐ Radiator bolts and nuts
- ☐ Carburetor flanges and controls
- ☐ Fuel lines
- ☐ Electrical connections
- ☐ Chassis bolts, nuts and studs
- ☐ Driveshaft flanges and bolts
- ☐ Cab bolts, nuts and screws
- ☐ Differential center bolts and nuts
- ☐ Air lines, diaphragms, valves, etc.
- ☐ Wheel bolts and nuts
- ☐ Axle flanges and wheel lugs
- ☐ Complete lower fifth wheel
- ☐ Front and rear spring U bolts and clips
- ☐ Complete steering gear
- ☐ Battery connections
- ☐ Headlights and road lights

Check or adjust . . .

- ☐ Fan assembly and bolts
- ☐ Winterfront operation—set for 165 deg.
- ☐ Carburetor—idle at 375 to 400 rpm
- ☐ Spark plugs—set to specified gap
- ☐ Engine governor—set to specified rpm
- ☐ Ignition points and timing
- ☐ Engine valves—if required
- ☐ All dash gages
- ☐ Air governor operation
- ☐ Hand brake
- ☐ Rear wheel brake linings—lubricate anchors and cams
- ☐ Brake drum trueness—with dial gage (max. 0.010)
- ☐ Brake lining to brake drum size
- ☐ Front wheel toe-in
- ☐ Front wheel linings—lubricate anchors and cams
- ☐ Repack wheel bearings if necessary
- ☐ Door locks, regulators, windshield wipers, etc.
- ☐ Install fire extinguisher, flags and flares, and tool box (if required)

And then . . .

- ☐ Lubricate complete unit
- ☐ Wash and clean-down complete unit

C O D (CHECK ON DELIVERY)

Continued

anchors, cams, oil seals and wheel bearings. Incidental to this operation, we also use a brake lining grinder to see that linings are concentric with the spindles for proper brake application.

A couple of years ago we attempted to dispense with this operation. We thought we had convinced the manufacturers of the importance of seeing to it that closer quality control in this regard should be observed. Before long, though, road failures—resulting from lack of wheel bearing grease, freezing-up of anchor and cam mechanism, wheel seals improperly installed, and brakes that were not balanced due to poor fit of the linings with the drum contour—made us go back to it.

Tighten every nut and bolt

As you'll see from the lists, we consider this pre-service inspection to be the time to tighten every nut and bolt on the entire vehicle. Then too, since components are relatively clean, we feel this is a good time to tune the engine completely, check the operation of the dash board instruments and make sure that the electrical system is set according to factory specifications.

Above all, we make a complete check of the braking systems—air and hydraulic—to be sure that they agree completely with the specifications embodied in the design and operate in accordance with our requirements.

One of the most important factors in making a proper engine tune-up is to have adequate instrumentation. Without the proper instruments, it is an almost impossible task to determine whether engine components meet specifications.

It is our opinion that any fleet operating its own shop will at least require a volt-amp meter, an engine tachometer, a compression tester, vacuum gage and timing light. With these a mechanic will at least know what is going on. Their proper application may also point to a need for additional equipment.

Distributor testing

The distributor offers a fine example of the need for adequate instruments. Construction of the distributor is now so exact that precision testing is a must. Visual inspection and a check with a feeler gage just isn't enough. As an in-

terim measure in scattered fleet operation, they may still have a place. But we have found it necessary and more convenient to pull the distributor for inspection on a distributor tester to check the eight or nine necessary requirements.

It is hard to say which items are the most important. But certainly the following should be included. . . .

1. Distributor circuit and point resistance test.

2. Breaker point spring tension test.

3. Degrees of point dwell test. This step should be taken *after* the first two.

Another important test should be made to determine the accuracy of the cam lobes on the tester to detect a worn cam or bent distributor shaft. Proper use of the tester will also indicate the amount of mechanical advance as well as that of the vacuum advance for comparison with available specifications.

Battery checks

These suggested tests won't satisfy requirements unless the battery and generator have been checked out. There is probably no unit more subject to abuse than the battery. It should be the starting point of any engine inspection procedure.

The battery must be clean and carefully checked for evidence of cracks and leaks. Foreign matter or electrolyte on its top will cause rapid discharge. Battery posts and cable connections should also be inspected for bad connections and corrosion. Lubricating compounds are available for posts and cables, although petroleum jelly or water pump grease seem to be in general use for this purpose.

If you have a volt-amp meter available, a battery capacity test can be made easily. If not, checking the specific gravity of the electrolyte with a hydrometer appears to satisfy most requirements. If the specific gravity falls below 1.225 there is no alternative but to recharge it. Reliable battery service can be expected only with a specific gravity of 1.250 or higher. Each cell should be within 0.025 points. And remember, at 32 deg, a good battery only gives 60 to 70 per cent of its best efficiency.

Many times the battery is blamed for poor cranking ability when in reality the starter's commutator is dirty or the brushes are badly worn. Visual inspection will usually detect these deficiencies. If you do use instruments on the starter, however, be sure that the electrical connections are tightened before using the instruments. This will protect the test equipment from sudden high electrical currents.



“Jack Rabbit” uses part-time drivers full-time safety

Careful selection, personal contact, financial incentive, governors and recorders, shop road tests and an employee newspaper substitute for safety meetings . . . By Sentinel-Star Express Manager C. R. Ochs

▼ OUR SAFETY PROGRAM is maintained without benefit of driver safety meetings. This is a source of pride for our “Jack Rabbit Line.” The nickname applies to the Sentinel-Star Express delivery truck fleet in Orlando, Fla.

The fleet, a subsidiary of Orlando Daily Newspapers, Inc., delivers papers to local carriers within a 100-mile radius of Orlando. The papers are picked up in Orlando late in the day and taken to carriers in outlying towns for delivery early the next morning.

Therefore, “Jack Rabbit” drivers are hired on a part-time basis. They work from four to six hours a day. A few even work less than two hours on shuttle and special delivery runs in the city. With part-time drivers who are never all there at the same time, you just can't hold safety meetings.

We started in 1947 with five trucks. Now we run 27 regularly scheduled units and three

spares. They roll-up better than 700,000 miles a year. With the steady increase in delivery service and equipment and the number of part-time drivers required to keep it rolling, we've had to establish effective safety control methods.

Along with the steady climb each year in our fleet's total mileage, our ratio of accidents of all kinds has *dropped* just as steadily. We've devised six main measures of safety control to maintain this record.

Driver selection

Our drivers must be mature—not so much in age as in sense of responsibility. This is observed through a personal interview after a detailed application form has eliminated the obviously unfit.

Only married men (with dependents preferred) are hired for regular runs. An appli-



"Jack Rabbit" nickname is used on fleet's trucks

"Jack Rabbit" uses

Continued

cant's wife must express willingness for her husband to work nights. Gripping and dissatisfaction on her part might upset him and make him inattentive to driving conditions.

The man's commuting connections and day-time schedule must be considered . . . if he's pressed for time, or sleep and meals are skimped, he's a potential driving hazard. He must also pass a stiff physical.

Personal contact

Driver supervision is just one of my many duties, but I try to have some conversation with every driver at least several times a week, if not daily. When a man has something to get off his chest, I make time to listen . . . then and there! Even if it's a personal problem, I talk it out with him. Keeping any problem bottled-up is bad for a driver's alertness and morale.

I've established two rules for myself in regard to the men. First, I won't ask them to do anything I wouldn't be willing to do myself. Second, I avoid dictating. Drivers are invited to talk back if they're dead set against doing something. If a man puts up a convincing argument, I'd rather back down than exert pressure. This rarely happens, but at least I've established a reputation for fair dealing with the men.

Mechanical devices

To cut down driver tendency to make up time

on route schedules by speeding, all over-the-road units are equipped with governors. These are set for 5 mph over the state's daylight limit for trucks.

All vehicles in the fleet carry trip recorders. These were first installed to protect our drivers. A couple of paper carriers kept calling in to beef about our men "goofing off" along their routes, delaying carrier deliveries. Trip recorders were installed in the trucks involved . . . with a word to the drivers to keep quiet about them. When the usual complaints came in later, I produced the trip records. Since they proved our boys weren't to blame, that ended the complaints.

These vehicle trip records can also be referred to for discussions on internal as well as external problems concerning route performance.

Financial incentive

When you involve a man's pocketbook in a safety program, it really pays off in all-out driver effort! We hit 'em where it hurts with the penalty of paying their own fines for traffic violations such as speeding.

By the same token, pay increases occur only if a man has no accidents. "Jack Rabbit" drivers can get automatic pay increases every six months. But, in the six-month period, if a man has had any kind of chargeable accident, his increase is postponed to the end of the next pay period.

Safe equipment

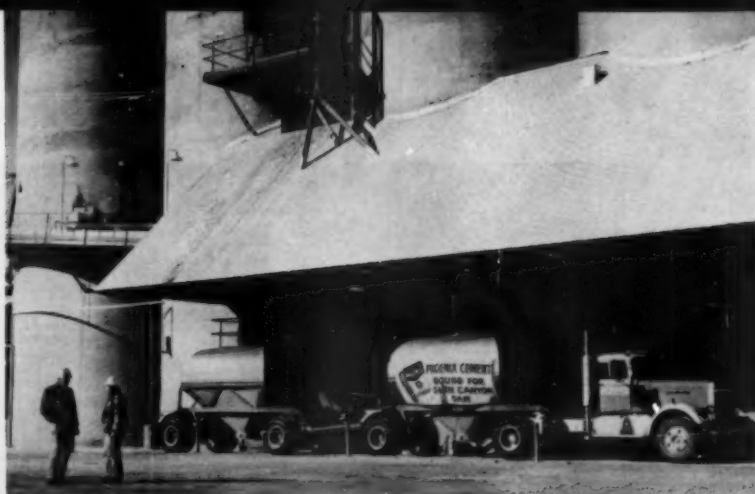
The "Jack Rabbit" maintenance shop is a one-man deal. So, we've had to devise our own means of making safety checks on fleet vehicles. Besides following-up on performance changes noted by drivers in the rigs they operate every day, we have a road-testing program.

Once a week our fleet maintenance man takes every truck out for a trial spin. The regular test route is varied and rugged with several occasions for backing up. When it comes to repairs, specialty work is farmed-out according to the total amount of work scheduled through the shop.

Outside opinion

Pressure applied through public opinion can be surprisingly effective in keeping drivers safety conscious. I feel that a manager should take advantage of such pressure points to aid in a fleet's safety program. Pride in knowing of public awareness of his own as well as his company's

(TURN TO PAGE 148, PLEASE)



Belyea pulls longest dam haul on record

**It's a saga of the New West . . . a story about
horsepower not horses . . . about tractor-trailer trains not
wagon trains . . . and Indians are involved—somewhat**

▼ THIS IS an adult Western—1961 version. It's as much a saga of the West as the stories of Wells-Fargo or the Pony Express.

But this is a story of the New West. So we'll tell you no tales of outlaws, gun-slinging marshals, or cowboys and Indians.

It's a story about horsepower—not horses . . . about tractor-trailer trains instead of wagon trains.

And while the setting is still the awesomely rugged mountain country of Arizona, the job of getting a load to its desolate destination takes not days but hours.

It's still a saga. For the construction of Glen Canyon Dam is a part of the history of the New West. And Belyea Trucking Co.'s custom-built fleet of 20 tractors and 40 trailers are playing a key role in the project.

Special jobs are nothing new for Belyea. At the fleet's Los Angeles headquarters are records covering many unusual hauls. The company delivered the 200-in. lens to the Mt. Palomar Observatory. It has hauled Atlas missiles to Cape Canaveral, Fla. It even hauled a dead whale!

These, however, pale by comparison with the Glen Canyon Dam contract. For, as one Arizona newspaper reporter noted, this is "the longest dam haul on record."

As far as anyone knows, it's the greatest ton-mile truck haul in the history of the trucking industry. It involves moving 564,000 tons (three million barrels) of dry cement over 188 miles of mountain and desert roads. First hauls started in February 1960. Complete job is expected to take more than three years.

Cement used in it would be enough for a high-



Belyea's Cottonwood shop handles the special rigs doing the dam haul with its full line of equipment



Lubrication is vital on this job where temperature extremes range from 120 above to 15 below 0

Belyea pulls . . .

Continued

way 20-ft wide stretching from San Francisco to New York.

Moving this cement is the job of Belyea Trucking Co. Contract calls for a delivery rate of 6000 barrels a day. Rigs arrive at the dam site 40 times a day at roughly 30-minute intervals.

The cement is produced at the Phoenix Cement Co. plant at Clarkdale, 188 miles due south, in Arizona's Verde Valley. Trailer trains (two hoppers per rig) are loaded at the plant and moved to Belyea's terminal at nearly Cottonwood.

The long, tough haul

In the project's early days, the haul went from Cottonwood to Flagstaff over U. S. Route 89A. The route followed the river through Oak Creek Canyon for 53 miles of hills, turns and switchbacks, with grades of up to seven per cent. Opening of Interstate Highway Route 79 last year meant that rigs could by-pass the canyon. This cut the maximum rise to four per cent and eliminated the cut-backs.

From Flagstaff the route is via U. S. Route 89 to the dam. It's a long grind through the desolate grandeur of the Navajo Indian Reservation. Outside of Cameron, Ariz., there starts a gradual 30-mile climb followed by a six per cent downgrade to the dam site. Belyea Operations Manager Les King compares this grade with the five-mile grade outside Bakersfield, Cal.

Adjacent to the dam site, the rigs pass over the world's largest single-arch bridge. Hauling the steel for this 700-foot span was another Belyea contract.

At the dam site, drivers straddle their two hoppers over a dumping pit. Their load is then channelled into one of six storage silos at the rim of the Canyon.

The impressive facts

The 376-mile round trip takes 10 hours—5½ hours up and 4½ back. Each tractor, trailer-train rig makes two trips a day. Belyea has a staff of 56 carefully screened drivers. Each man gets two days off a week. While time is important to the operation, drivers know that speed is not their dominant goal. One violation of speed limits is all they're allowed. The second one costs them the job.

Basic statistics of the job are impressive. Each rig has a 76,800-lb maximum gross and carries 27¾ tons of payload. Over the life of the contract they'll make from 24,000 to 27,000



Shop equipment includes transmission stand, dynamometer, steam cleaner, wall-mounted air lines

round trips. They'll travel more than 8.6 million miles (equivalent to 328 trips around the center of the earth), for a total of 137,052,000 ton-miles. They'll face temperatures ranging from a low of 15 deg below zero in winter to 120 above in summer. And behind the operation lies a story of an essential preventive maintenance program.

PM is the "Lifeline"

"Preventive maintenance is our lifeline," according to King. "We cannot afford breakdowns. First, we're so far from a major supply center (107 miles from Phoenix, Ariz.) with only one daily truck and two bus deliveries possible. Second, emergency repairs in the sparsely-populated stretches of the Navajo Reservation would be almost prohibitive in cost. Third, we must keep the cement rolling."

The fleet's base is a converted copper smelter's brick warehouse at Cottonwood. It has four departments: (1) Office and driver room, (2) tire room, (3) repairs and overhaul shop, (4) servicing area.

The PM program has four intervals. At 1500 miles there's a five-item check. At 5000 miles there are 21. The third inspection at 20,000 miles covers 22 items and there are 28 points on the 30,000 mile inspection. Lubrication is on a round-the-clock basis, with each rig

(TURN TO PAGE 160, PLEASE)



It's a custom-built fleet

Belyea's fleet of 20 tractors and 40 hopper trailers were custom built for the Glen Canyon Dam project. Here are some of the basic specifications and accessory equipment . . .

TRACTORS

Make and model: Autocar Model No. A102T with 175-in. wheelbase and aluminum frames, wheels, hubs, gearbox and "Driver" cab.

Engine: Cummins Model No. NH250 diesel.

Transmission: Spicer Model No. 8245, 4-speed.

Auxiliary: Spicer Model No. 8345, 4-speed.

Clutch: Spicer 14-in., 2-plate.

Front axle: Timken 11,000-lb.

Rear axle: Timken Model No. 134C single reduction with 23,000 lb rating.

Brakes: Bendix-Westinghouse air brakes, MGM emergency brakes and Williams compression-exhaust brakes on engine.

TRAILERS

Make and model: Fruehauf Model No. CAHD5-510 semi-trailers and CAHDF5-510 fill trailers.

Each hopper trailer has 27,000 lb capacity.

Units have high-tensile steel trusses and chassis, aluminum fill dome, aluminum body and body cover.

Axles: Timken dual-tire single.

Brakes: Bendix-Westinghouse 16 1/2 by 10-in.

Brakes: 16 1/2 by 10-in. with Bendix-Westinghouse air brakes.

Wheels: Alcoa aluminum with sealed oil bearings.

Tires: General "Nygren" 10.00-22.

ACCESSORIES

Elston-Napco electrically-controlled sander

Wagner Electric tachograph

Kysor automatic radiator shutters

Bostrom driver seats

Fruehauf air hitch

Signal-Stat turn indicators

Tung-Sol signal flashers

Fontaine fifth wheel

Ross steering gear

Berg breakaway valve

FOR THE FIRST TIME

A CAR HAS BEEN DELIBERATELY DESIGNED TO CUT MAINTENANCE COSTS ...AUTOMATICALLY

The '61 Ford saves more than
\$84 a year per car on its "takes-
care-of-itself" features alone!

The '61 Ford automatically reduces your routine maintenance expenses as much as 80%. With the chart below you can actually prefigure your savings right here and now. This chart uses 24,000 miles annually per unit as a fleet average . . . your savings may be even more.

OTHER FLEET CARS	1961 FORD
CHASSIS LUBRICATION (\$1.50 every 1000 miles) \$36.00	30,000-MILE CHASSIS LUBRICATION (Under normal driving conditions) —
OIL CHANGES (5 qt. @ 50¢ every 2000 miles) 30.00	OIL CHANGES (5 qt. @ 50¢ every 4000 miles) \$15.00
MUFFLER REPLACEMENT (Including installation charge—once per year) 15.00	DOUBLE-WRAPPED ALUMINIZED MUFFLER (Lasts up to 3 times as long as ordinary mufflers) —
BRAKE ADJUSTMENTS (\$2.00 per adjustment—approximately every 6000 miles) 8.00	NEW SELF-ADJUSTING BRAKES (Mechanically adjust automatically for the life of the lining) —
WAXING (Once per year @ approxi- mately \$10.95) 10.95	FORD DIAMOND LUSTRE FINISH (Never needs waxing) —
TOTAL \$99.95	TOTAL \$15.00

FORD SAVES YOU \$84.95

All prices based on average national cost

Add up these fleet-minded savings. Then let your Ford Dealer demonstrate the '61 Ford's built-for-people comfort features and remarkable ease of handling. You'll see why the '61 Ford has such a potentially high trade-in value . . . and why Ford is such a logical, economical choice for your fleet.



Beautifully built '61 FORD
for economy
and lasting value . . .

CONSTRUCTION FLEET MAINTENANCE



COMPILED by the EDITORS of COMMERCIAL CAR JOURNAL

AT YOUR SERVICE . . .

Winter shutdowns, even in cold areas, are becoming shorter and shorter. Maintenance departments are more than ever concerned with problems of winter operation.

Shift shut-down procedure is particularly important. Vehicles should always be stopped on high, dry ground—even on planks—in order to eliminate starts with tires or tracks frozen in slush. Tracks must have regular cleaning schedules. Rubber-tired rigs with fenders should have frozen material removed to prevent it from scraping tires. Also, frozen mud can make scraper apron and bowl inoperable.

Condensation freezing can shut down rigs just because air tanks were not drained daily. In cold weather, they must be drained at shut-down. Card-board, plastic or canvas should be provided to cover operators' seats as a move toward a dry seat start the next morning. Starting and warm-up procedures should be established so that no rig is laid into heavy work while under correct operating temperature.

The high cost of haphazard maintenance, as compared with almost any kind of regular PM, is sometimes overlooked. International Harvester has developed some interesting cost figures on the subject.

IHC reports average labor time for a 1000-hour-inspection of a heavy-duty truck is 30 man-hours (or approximately \$75). If not done, and just one drive wheel planetary is lost, the costs are not a pretty picture: Downtime, \$100; Bearing failure, \$40; Related parts, \$1200 (they could run to \$3600); Labor, plus 50 per cent overtime, \$200. This makes a total of \$1540.

On a three-scraper job, what if a pusher should be lost for lack of maintenance? With each scraper moving 150 yards of dirt at 38 cents per yard, four days' downtime will cost \$7044. Add to this parts and labor necessary to get the pusher back in action. The total cost will show you that it's not a good way to move dirt profitably—or to finish contracts before high late penalties take a further toll from the contractor.

Troubleshooting final drives can

be time-consuming. Here are a few suggestions which should help you to locate trouble—and to prevent it from reoccurring.

Noisy gears, as in most gear trains, usually indicate chipped, broken, pitted or galled teeth. End play in the pinion in a final drive is usually caused by a loose bearing cap, or bearing out of adjustment. End play in axles is caused by bearing failure in most cases. Bearing failure is the result of a loose axle nut, which in turn may be caused by a loose retainer cap. In PM inspections tighten axle nuts, making sure threads are undamaged. Always replace retainer cap and tighten the cap screws that hold the cap.

1960 Construction Maintenance Index

Here's your annual Construction Section index you can use to locate the special cost-cutting, time-saving articles published during 1960 in this special section for con-

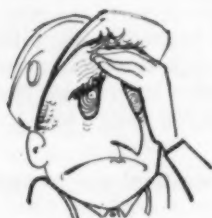
struction and off-highway fleet maintenance men. If you want extra copies of specific stories, just drop us a line using the free postage-paid card to the Editors.

At Your Service	Every Month	C1
Maintenance at Navajo Dam (L. H. Houck)	Jan. C2	
Tire tips boost tire life	Jan. C6	
How to service the oil cooler	Jan. C4	
Troubleshooting air brake compressors	Jan. C7	
McDowell: Mechanic cost training pays	Feb. C2	
Shop hints from McDowell	Feb. C4	
Why crankshafts fail (W. E. Irwin)	Feb. C6	
Balanced maintenance pays-off for Glasgow, Inc.	Mar. C2	
Safety rules for maintenance men	Mar. C6	
Sealant locks pad bolts at M-C & S	Mar. C7	
What you can do to cut repair costs	May C2	
How to service chain drives	May C6	
Dust in diesels doesn't do. Filter it out	May C6	

Shop ingenuity boosts equipment use	June C2
Allison torque converter maintenance	June C6
How to replace ball and roller bearings	June C2
Construction equipment engine service data	July C2
Construction equipment selection specifications	July C6
Construction equipment statistics	July C16
Install oil seals right the first time	Aug. C2
Off-highway truck selection specifications	Aug. C4
Portable lube pit cuts service time	Aug. C7
Records and equipment at Blythe Bros.	Sept. C2
Match multiple drive V-belts with care	Sept. C6
Using idle equipment hours	Oct. C2
Proper track shoe selection cuts maintenance	Oct. C6
Shop ingenuity brings bigger profits	Oct. C6

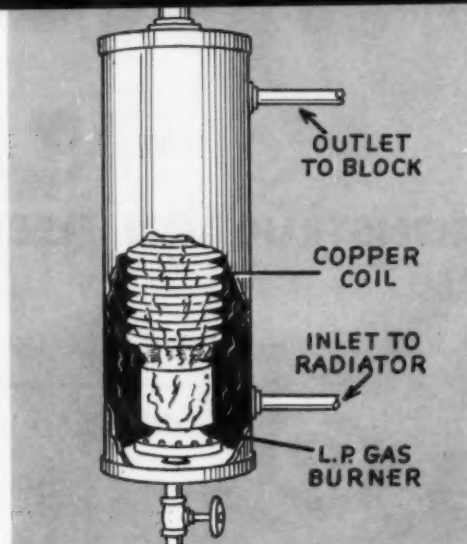
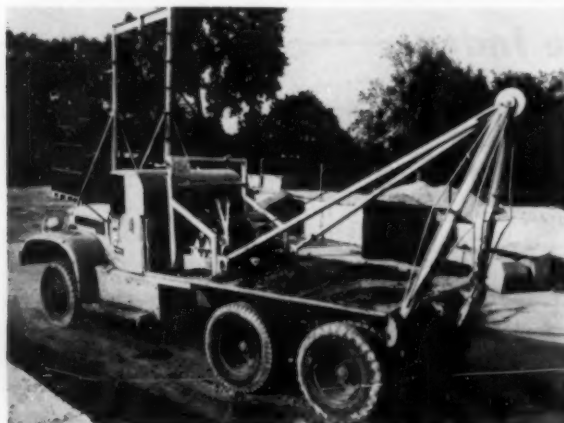


I. A. McClure, master mechanic, Utah Construction Co., shows how he solved a fire extinguisher "headache." His maintenance shop is located over 60 miles from civilization near (?) Riverton, Wyo., site of the Lucky Mac stripping operation. Because of the remote location, the heavy-duty extinguisher has to be readily accessible to both shop and mine pit. In case of shop fire, a couple of men can just rush it down the ramp. For an equipment fire in the field, it can be loaded into a pickup truck from the rear of the shed. Floor height of the shed is level with truck bed.



Getting Rid of Headaches

What do you do when a ready-mix truck breaks down on its way to the pour site? Leslie Orr, plant manager, and Jack Day, shop foreman for Hankamer's Quality Concrete, Topeka, Kan., came up with the answer when they "modified" an old Army 6 x 6. Tow truck has enough "guts" to haul a disabled mixer to the pour site, then bring it back to the shop for repairs. Towing arrangement consists of a heavy A-frame with legs bolted to clevises at the rear. Hankamer mixer trucks are all equipped with U-bolts welded in the centers of front and rear bumpers. Clevis in tip of the A-frame bolts over the U-bolt. System lets the towed mixer track properly without swaying. If disabled truck has to be raised, the A-frame fits into a different pair of clevises 18-in. higher on the back of the



Ernest Redding, master mechanic and shovel operator for Clematis Brook Sand & Gravel Co., Watertown, Mass., was having major starting problems on sub-zero mornings, so he made his own preheater for the shovel. Basic unit is a gas water heater and coil. He hooked the gas burner up to a tank of LP gas installed in the rear of the shovel. The heating coils connect to the engine's cooling system. Lighting the heater 15 minutes before starting time guarantees a fast and easy start every time. The preheater soon has warm coolant circulating through both the engine block and radiator.

tow truck. There are also high and low settings for a straight tow bar. Low setting is on the special apron on the rear (see photo at right). High setting is to a heavy pin dropped through a 6-in. pipe welded to the truck's steel floor. There are also grabhooks suspended from the pads behind each pair of rear wheels which secure heavy wheel chocks. Pulley frame over which the winch line passes is made of pipe. Support legs are braced against buckling in the middle by struts of 1-in. bar stock. These are welded to 12-in. squares of steel plate at right angles to the middle of each leg. Telescoping pipe braces extend to either side of the forward end of the truck bed to hold the pulley rigid against side thrust or twisting. Bolt holes permit adjusting the length of each brace.



By Bill Palmer

Dean Machinery Company moves into its new home and learns that, although only twice the size of the old one, the . . .



New Shop Design Triples Work Output

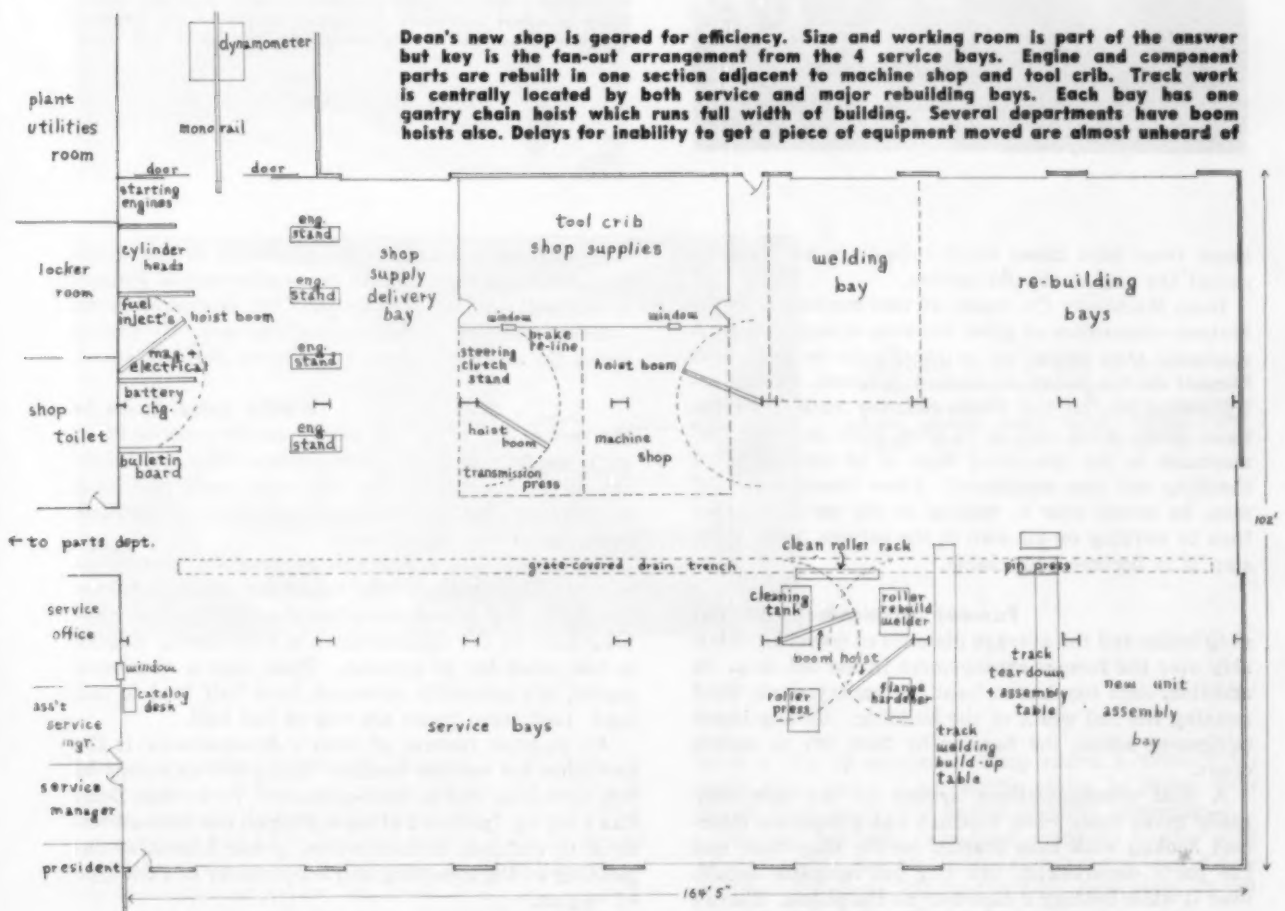
SEVERAL EARTHMOVING CONTRACTORS have already copied in their own shops some of the special features of Dean Machinery Company's new maintenance and repair shop. It's part of the new facilities specially built for the Caterpillar dealer in Kansas City, Mo.

The new site is just off a busy expressway on the outskirts of the city in the Armourdale district. Buildings are on a high bluff overlooking the expressway.

In the rear, there's 28 acres of hilly "proving ground" used for demonstrating or testing equipment.

Key to the shop's high efficiency is the special layout. Service areas are readily accessible to specialized servicing and rebuilding departments (as shown in the floor plan below). This "fan-out" type of layout puts the four service bays nearest to the shop foreman, shop office and parts department. All subsidiary departments surround these four bays in a large semi-circle.

Dean's new shop is geared for efficiency. Size and working room is part of the answer but key is the fan-out arrangement from the 4 service bays. Engine and component parts are rebuilt in one section adjacent to machine shop and tool crib. Track work is centrally located by both service and major rebuilding bays. Each bay has one gantry chain hoist which runs full width of building. Several departments have boom hoists also. Delays for inability to get a piece of equipment moved are almost unheard of

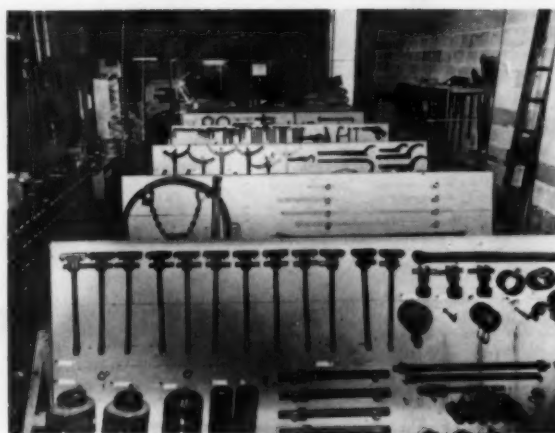


New Shop Design . . .

Continued

This arrangement puts major emphasis on "Service"—which is particularly important for Dean (and for you too if your emphasis is on service and light repairs).

Farthest from the center of operations are the bay for assembling new equipment and the two bays for major rebuilding and overhauls. This arrangement



Hand tools are hung on 5 x 8-ft panels set in 5 pairs back-to-back like a row of narrow tents. Each panel has special tools—engine, pullers, clutch and transmission, final drive, etc. Little-used tools are hung inside, are still accessible

Heavy engine stand can hold a Cat D-9 engine and revolve it through a full circle to give access to it from any angle. Shaft is offset vertically for added height of big engines. Pedestal is sunk in a reinforced concrete block 4-ft deep

keeps these bays closer to all subsidiary departments except the engine rebuild section.

Dean Machinery Co. starts all new mechanics at the bottom—regardless of prior training or experience. A mechanic then moves up as rapidly as he can prove himself on the heavy equipment involved. Initial assignments are on the steam-cleaning rack, then the paint shop. Next step is to work with an older "A" mechanic in the rebuilding bays or at assembling or checking out new equipment. From there, as a "B" man, he moves over to helping in the service bays—then to working on his own in the service bays. Final step is to become a specialist.

Fan-out arrangement has cut

shop traffic and the average distance of travel considerably over the former arrangement in the old shop. In addition, each bay has at least one gantry chain hoist running the full width of the building. Moving heavy equipment across the bays is by fork lift or mobile crane.

A dual communications system in the new shop really saves time. Shop foreman has a separate intercom hookup with each station on the shop floor and the parts department. He can get complete details over it while holding a customer on the phone. There's no need to say "I'll call you back." A public address system is also used throughout the shop.

A welcome feature of the new shop is the dynamometer room right next to the engine rebuild section. A monorail over the dyno projects into the rebuild area—makes transfer of engines fast and easy. No engine leaves the section without its turn on the test stand.

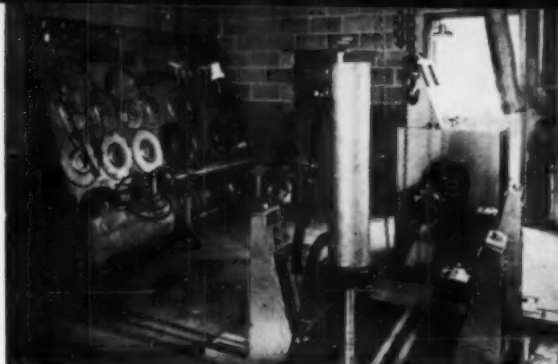
To hold noise down in

the rest of the shop, the dynamometer room is fitted with carefully notched sliding doors which fit tightly around the monorail. Also, the room itself was built outside the shop proper (see floor plan on previous page) to further reduce noise.

One man takes a full day to break-in or test an engine. This includes two hours for set-up, another two hours for take-down after the test. Actual running time on the dynamometer is four hours. Engine is first idled for 15 minutes. Then, over a 45-minute period, it's gradually advanced from half load to full load. Last three hours are run on full load.

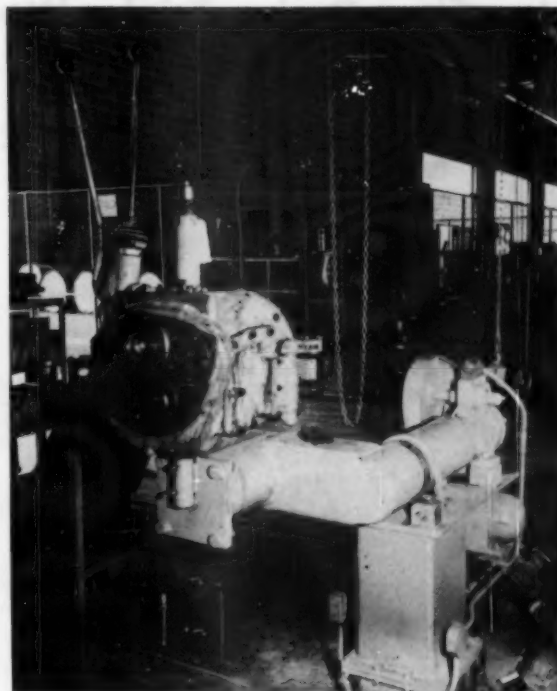
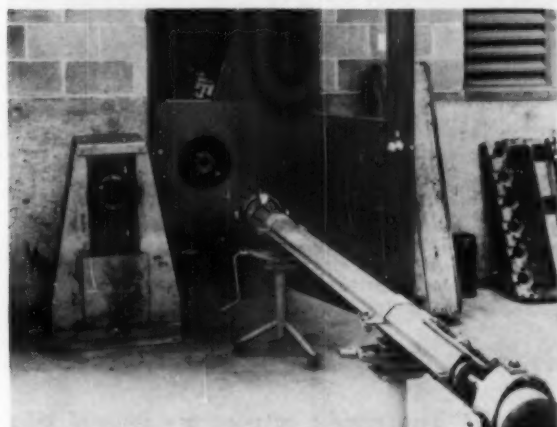
An unusual feature of Dean's dynamometer is the provision for outside hookup. Often it's necessary to test an engine still in the equipment. To do this, Dean has a set-up (pictured at right) which can connect the dyno to clutches, transmissions, power take-offs—depending on the mounting and accessibility of each type of engine.

Engine stands devised for the new shop have been widely copied by fleetmen. They will hold a Cat D-9

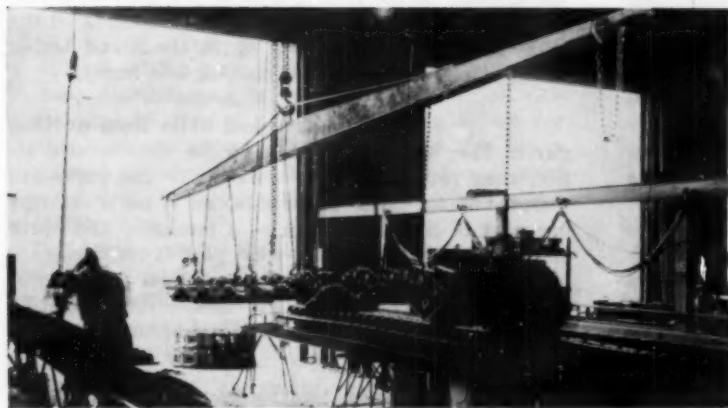


Engine dynamometer room is next to engine rebuild section—has monorail to speed handling. All engines get a 4-hour test run, including 3 hours at full load, before leaving the shop. Adapter plates for most engines are nearby

Engines can even be tested in the equipment. Dyno has a 10-ft driveshaft running outside the shop so hookup can be made to PTO, transmission or clutch. Short shaft at left with dual U joints connects dynamometer to driveshaft



The big engine stands can also accommodate heavy transmissions, torque converters and clutches. Special brackets are used to make the conversion. Shop has added an electric motor and chain drive to power each engine stand



Shop-built boom is used to move tracks around track repair bays while opened out flat. Boom is 24 ft long, suspends from gantry chain hoist. Chains with hooks are spaced at 36-in. intervals

engine and revolve it easily through a full circle to give access to it from any angle. Horizontal parts are 10-in. diameter tubing of $\frac{1}{2}$ -in. stock. Vertical offset is a welded box of $\frac{5}{8}$ -in. plate with a stiffener inside welded to both tubes. Bearing end of main tube turns on two rollers of $2\frac{1}{2}$ -in. bar stock.

A shaft welded to the drive end of the main tube extends through a bearing block to a gearbox (taken

from a No. 12 scraper). Shop added a drive gear, chain drive and a 1-hp electric motor to power each stand. Two-directional switch permits reversing.

Various brackets have been made to handle each type of engine, transmissions, clutches and torque converters. Brackets bolt to the 1-in. face plate at the bearing end of the offset tube.

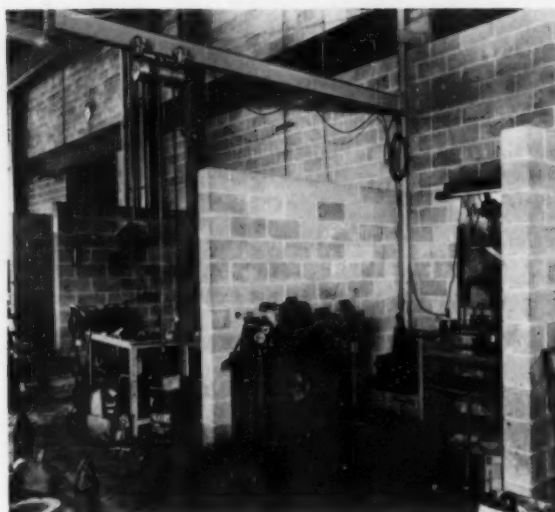
Since it has a high demand for new parts, the engine

New Shop Design Triples Work Output

Continued



Dean service trucks carry a full complement of service manuals and parts catalogs for each type of equipment. When ordering parts from the field, there's no guessing. All parts are ordered by number to prevent errors



Wall adjacent to engine rebuild section has cubicles to separate areas for specialized work like cylinder head grinding, valve work, electrical overhaul, and pump and injector service. Overhead hoist speeds up parts transfer

repair section is located near the entrance to the parts department. The tool crib is just as handy from the other side.

In the same bay, next to the engine stand is a row of cubicles (pictured above). These are equipped for specialized repair of engine parts and electrical components. An engine mechanic need only step across the aisle to do the work or to give it to a specialist.

Track roller rebuilding is done in a U-shaped area. Shafts are first removed at the roller press, then dunked in the cleaning tank. Next, they go on a roller-type conveyor to the automatic roller-rebuild machine. Built-up rollers then proceed to a flange hardener.

Track repair bay has one roller-type conveyor for track tear-down and assembly. This feeds into a pin press for pin removal. Another conveyor leads into an automatic track-rebuild welding unit.

For moving tracks around while opened out flat, the shop built a special boom to suspend from the gantry crane hoist. It's made of 5/16-in. steel plate welded in T-fashion. Boom is 24-ft long, can take the longest piece of unrolled track expected in the shop.

Steam cleaning and painting are done in a small building near the shop. Cleaning bay has a steam cleaner in one corner and a paint stripping unit in the opposite rear corner. This permits cleaning and stripping to be done at the same time in the same bay. For special or difficult cleaning, there's a

"treadmill" arrangement outside. Six railroad rails are embedded in the pavement. Procedure is to tether the crawler at the rear, put it in low gear at a fast idle, and let the tracks clump around, skidding on the shiny rails. Combined action of the steam and flexing of the tracks gets encrusted mud off in a hurry.

Mechanics spend little time getting parts. They order these through the shop service office, then return to their work while the parts are rounded up for them. A complete set of parts catalogs are next to the parts room so a mechanic and parts clerk can check if in doubt what part is required.

When the parts are issued, stock boys with supermarket carts collect and deliver smaller items right to the mechanic. There's no scrounging around for boxes or bags to carry parts in.

This parts ordering system has . . .

- Cut to a minimum the ordering of wrong parts.
- Made mechanics organize their work better.
- Kept mechanics doing productive work—and not chasing parts.
- Established a positive control and distribution of all parts.

Dean Machinery Company moved into its new quarters in September, 1959. It didn't take long to find out what the new shop layout meant. Within a year, they proved that while the floor space was only doubled over the old facilities, their productive efficiency had tripled.

Army School Trains Good Operators



Class on road graders gets practical exercise on leveling gravel for road surface

Student operator tries his hand at dozing large boulders across training field

Army-trained heavy-equipment operators, can make good operators for contractors after a two-year hitch in the Service

IF AN ARMY-trained equipment operator knocks on your door, he may be better than you think. Although the U. S. Army isn't a training school for earthmoving contractors, it does train over 2000 heavy equipment operators a year to fill military needs. Most men spend two or three years in the Army, then return to civilian life.

The Army operates the world's largest construction equipment operators' school at Fort Leonard Wood, Mo. Over \$2½ million worth of heavy equipment is available there for the training program. Students learn to operate motor graders, crawler tractors and dozers, towed scrapers, rollers, rooters, and air compressors.

The Construction Machine Operator Course lasts six weeks. There are three two-week periods covering the grader, dozer and scraper. First week of each period is devoted to nomenclature and function of the equipment. Second week is spent in practical exercises—working with the equipment and learning the operator maintenance procedures.

The actual course on each major type of equipment breaks down like this. . . .

- **GRADERS:** Student first learns to operate and maintain the equipment—including blade controls. He then learns basic road construction, slope and grade stakes, grading and ditching, and road maintenance.

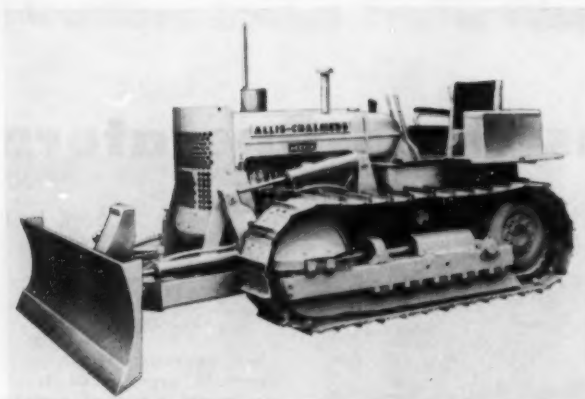


- **DOZERS:** After learning basic operation and blade controls, student gets practical exercises in bulldozing, angledozing, constructing cuts and fills, making side hill cuts, and in removing trees, stumps and boulders. Other subjects include operation of steel-wheeled, wobbly-wheeled, and sheepsfoot rollers.

- **SCRAPERS:** Student gets basic training on the towed scraper and the earth auger, then learns cut and fill techniques, downhill loading procedures, and how to unload large stumps and boulders.

About 35 hours are spent operating each of the three machines. When a student is graduated after six weeks, he has the ground work for becoming a good equipment operator.

Do Army-trained operators make good civilian employees after leaving the Service? According to Sgt. James C. Stone, NCO in charge, the majority of students, who complete the Machine Operator Course and who get further experience during their military hitch, would be exceptionally well qualified for civilian employment.



Allis-Chalmers has added a new crawler to its line. It's offered with a 43 hp gasoline engine (H-3) or with a 40 hp 4-cyl diesel (HD-3). Rated horsepower is at 1650 rpm. A 4-speed transmission gives speeds from 1.3 to 4.8 mph. A "shuttle" clutch with forward, neutral and reverse positions permits fast reversing without shifting the transmission. Tractor is in the 3-ton class. Circle 300 to get more details.



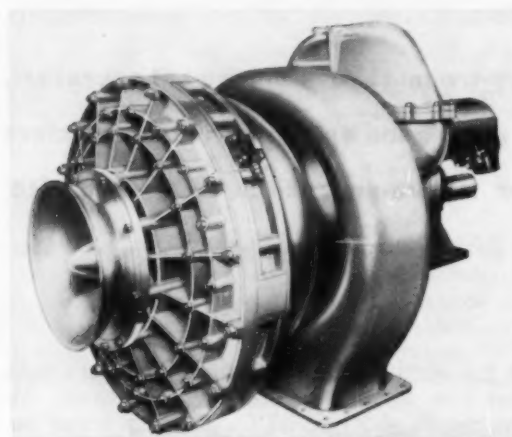
Crane Carrier Corp. is producing a new 25-30 ton model called the Universal 2564 Carrier series. Chassis accommodates most ratings and GVW requirements of crane manufacturers. More than 20 specifications for 25 and 30-ton uppers were tabulated to get the features required for crane installation. The Universal 2564 is the latest addition to the company's line. For more information, circle 301 on the reply card.



**IN
CONSTRUCTION
EQUIPMENT**

USE FREE REPLY CARD INSIDE
BACK COVER TO GET MORE DETAILS

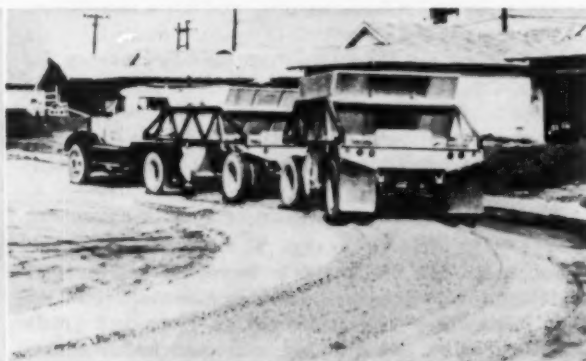
Waukesha is entering the gas turbine engine field for powering off-highway equipment. Engine shown here gives 400 hp—is designed to go 20,000 hours or more between overhauls. Engine weighs 620 lb (1½ lb per hp), is a compact 50-in. long, 28-in. wide. The 400 hp rating is with output speeds of 2500 or 3600 rpm, whichever is desired. Unit is a free shaft engine giving high torque even at zero rpm. To get more details, just circle 302 on reply card.



The Model M-45SX rear dump is Mack Truck's latest entry for mining and quarrying fleet operators. It carries a 45-ton payload in a 28-yd body. Truck is powered by a 450-hp V-12 diesel driving through an 8-speed over-gear transmission or optional torque converter. Front air brakes and rear air-hydraulic brakes give positive braking with fail-safe features. Truck has 4-wheel drive, uses 18:00 by 25 tires. Circle 303 for more details.



Latest thing for spreading roadbase material is this Spreader Train from Challenge-Cook Bros., Inc., Los Angeles. Units carry up to 28-ton payloads, can spread material a full 8-ft wide through bottom gates. Gates are driver-operated from the cab to give uniform control for even spreading. Aluminum alloy or high tensile steel hoppers are available. Spreader Train is designed for use with a two-axle tractor. Circle 304 to get more details.



USE THESE PRODUCTS FOR THE BEST IN TIRE SERVICE



Tube or tubeless Truck Valves of all types are among the Schrader Valves used all over the world.

1



#3650 Chuck Gauge will deflate, gauge, inflate—with one finger. Install several, in all tire service areas.

2



3

Service Package of 100 Schrader Caps.
Service Package of 100 Schrader Cores.

4

Schrader Self-Vulcanizing Patches. Quick, easy, permanent.



HOW TO ESTABLISH BEST TUBE/TUBELESS SERVICE PRACTICE

1

Avoid costly tire emergencies! Stock Schrader Valves to match all your needs. And always install a new rubber-covered snap-in valve whenever you change tubeless tires. (Schrader's special mounting tool does it in seconds.)

2

Check all tires daily in the shop with Schrader Gauges, and keep pressure records. Comparing pressures helps catch flats before they happen, not on the road where it costs real money.

3

Make certain the Schrader Caps and Cores you need are always on hand for replacement. They not only seal air in your tires best, but seal dirt out too.

4

Use convenient Schrader Patch Kit—all you need to get a real chemical-cure patch. Works instantly—cold—for tube or tubeless.

And remember, Schrader makes Chucks, Couplers, and Accessories to help your airlines operate to their best efficiency, plus full lines of Tube and Tubeless Valves for any vehicle. Order from your supplier, and specify genuine Schrader Products by name.

Send for this catalog



Schrader
a division of **SCOVILL**

A. SCHRADER'S SON • BROOKLYN 38, N. Y.
Division of Scovill Manufacturing Co., Inc.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

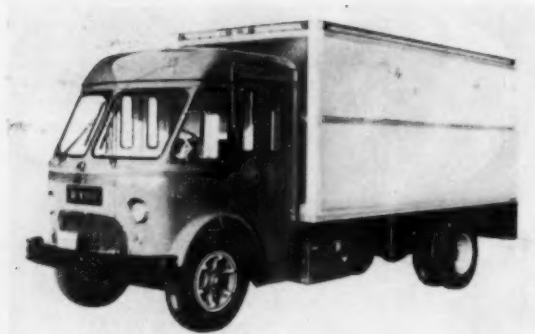
Made in America to American Standards of Quality.



in trucks

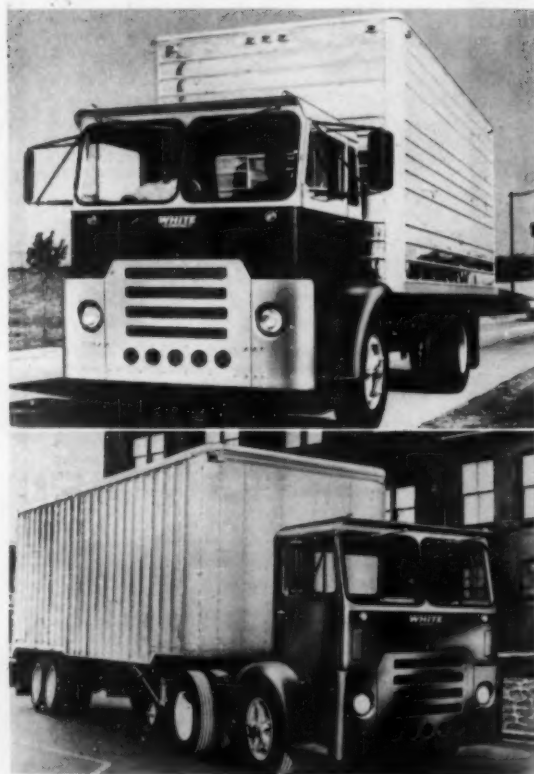
It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover



Refrigerated wholesale delivery truck is the largest ever produced by Divco-Wayne Corp., Detroit, Mich. The 13,000-lb-capacity, medium-size unit has a 16-ft body, will later be available with an 18-ft-interior body. The chassis wheelbase is said to be designed to provide shortest possible turning radius for the new unit, says Divco. The company expects to extend the line to include insulated and non-refrigerated trucks with bodies ranging from 14 through 18-ft interiors. Various optional fittings will be offered to meet a number of wholesale delivery requirements. The company previously specialized in retail multi-stop units.

For more information, circle 340 on reply card



White announces series of

White Compact in both truck and tractor versions has set-back front axle with 80-in. track permitting 50 deg turn in either direction. BBC is 65 in. on truck and 59 in. on tractor. Bumper to center line of front trucks and tractors

WHITE MOTOR COMPANY has added a new 1500 series to its line of trucks and tractors. Called the White Compact, the new series is offered in GVW's from 15,000 to 28,000 lb and in GCW's up to 60,000 lb.

Outstanding feature is an 80-in. wide track front axle permitting a 50 deg wheel cut in either direction. Actual turning diameter for the tractor with a 20 ft trailer is 27 ft 7 in., which is about 11 ft smaller than with conventional tractors. In the truck model, it reduces the turning diameter by 13 ft.

In tractor versions, the White Compact is offered in wheelbases from 74 to 96 in. Truck version goes from 114 to 150 in. Both versions have outboard mounted front springs and the 80-in. wide track front axle which lines up with the outside dual of the rear axle.

Bumper to back of cab dimension (BBC) is 59 in. for the tractor and 65 in. for the truck. Distance from bumper to center line of front axle



in fleet cars



Compact taxicab from Dodge for 1961 is based on the new Lancer. It's a 5-passenger model on a 106-in. wheelbase with Torsion-Aire suspension. An alternator replaces the generator for longer battery life. The engine is a 170-cu in., 101-hp, inclined "6" with an 8.2 to 1 compression ratio. Heavy-duty manual transmission is standard. More details? Circle 320 on reply card



Police patrol, pursuit or emergency vehicle is the Lark Marshal from Studebaker-Packard for '61. Body styles include 2 and 4-door sedans and 2 and 4-door station wagons. A wide choice of engines and other heavy-duty components permit customizing these units to suit various law enforcement requirements. More details? Circle 321 on reply card



1961 taxicab from Studebaker-Packard is a specially-designed severe-service vehicle that is roomy as well as sturdy, says maker. Available with six or 8-cyl engine, it also features a new recirculating ball steering gear and 3-speed heavy-duty transmission. Floors are flat, flush with doors for easy entrance and exit. More details? Circle 322 on reply card

compact trucks

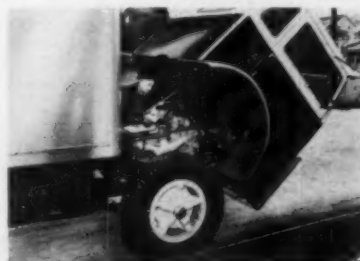
is 47 in. on both vehicles. The setback front axle gives light chassis weight on the rear permitting greater axle loading. Tractor is available with an optional off-set fifth wheel giving even greater weight transfer to the front axle.

Short BBC and setback front axle give 2 ft more body length in the same overall length as conventional units. For example, the 150-in. wheelbase chassis accommodates a 20-ft body.

A large choice of White Super Mustang gasoline engines are offered in both the truck and tractor models. Standard engine is the 6-130A for the truck and the 6-145A for the tractor. Optional in the truck are the 6-145A and the 6-170A and in the tractor the 6-170A and the 6-185A.

White has designed a new torsion bar cab tilting device for the Compact which cuts weight and is virtually maintenance free. It counter balances the cab, requires little effort to tilt. In tilted position, engine is fully ex-

posed (see photo) for maintenance accessibility.



Cab has no gingerbread or extra frills. Emphasis is on low cost maintenance, good visibility and easy driver access. Cab step is 17 in. from ground, and with the piano hinged



wide opening doors, makes entrance easy. As shown in the accompanying

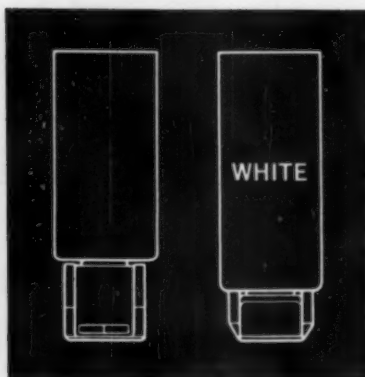
picture, the cab layout gives good visibility in all directions. Flat glass is used throughout to lower replacement costs in case of breakage. Bumper guard protects radiator, lights and front end sheet metal and is replaceable as a unit if necessary.

White told COMMERCIAL CAR JOURNAL that the new Compact is designed to fill most fleet operators' requirements. The tractor is particularly well suited for city delivery and piggyback service and for peddle runs. The truck version is aimed primarily for city delivery work.

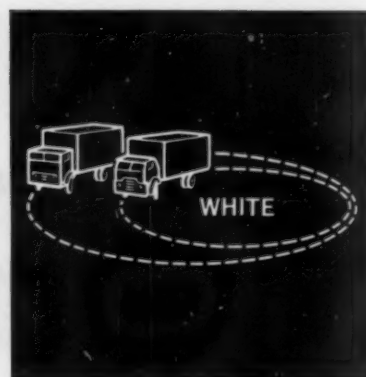
CCJ also learned from Mr. H. D. Weller, vice-president-sales, that fleet tests indicate operating and maintenance costs are up to 3¢ per mile lower than conventional equipment in the same service. He also said the new Compact is doing 17 per cent more work in the same period than conventional trucks. Six Compacts can generally do the work of seven other trucks, he concluded.

The White Compact was initially introduced at the National Automobile Show in Detroit (Oct., page 102). Fleetmen attending the ATA Convention in New York also got a preview of the new line in exhibition there. More details? Circle 400 on reply card

MEET THE NEW WHITE "COMPACT"

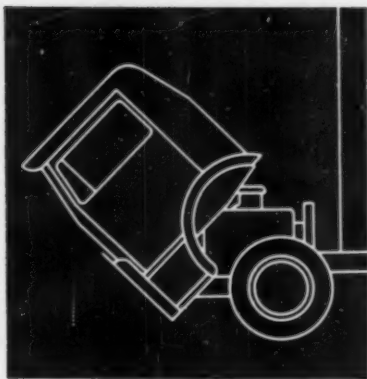


1 PAYLOAD: A truck that gives you a two-foot-longer body (for more payload) in the same overall length. A tractor that will handle two 20-foot boxes or a 43-foot trailer in a 50-foot state with ease.



2 MANEUVERABILITY: A work horse of a truck or tractor that runs circles inside any other competitive vehicle. Engineered for city traffic and terminal operations, it covers more territory, quicker.





3 SERVICEABILITY: Designed to get the job done faster and at less cost. New manually operated tilt-cab has torsion-bar counterbalancing for safe, easy operation, quick engine accessibility.

Never before has there been a truck or tractor that can maneuver so much payload, at so little cost, so quickly — through city traffic, in and out of congested terminals and tight-squeeze loading docks.

Because there's never before been a heavy-duty vehicle with an ultra-short wheelbase and a front wheel-cut of approximately 50 degrees in either direction!

Imagine a truck with a turning circle up to 22 feet smaller than other trucks, a tractor with a similar turning advantage, and you'll begin to get the idea.

Figure faster trip times, wider territory coverage and bigger payloads, and *instantly* you get the whole picture:

It's the new WHITE 1500 COMPACT, in truck or tractor... to give you a competitive edge!

THE WHITE MOTOR COMPANY, CLEVELAND 1, OHIO

Branches, distributors and dealers in all principal cities

**CALL YOUR LOCAL WHITE BRANCH OR
DISTRIBUTOR FOR A DEMONSTRATION TODAY!**

WORLD LEADER IN  HEAVY DUTY TRUCKS

WHITE



in trailers

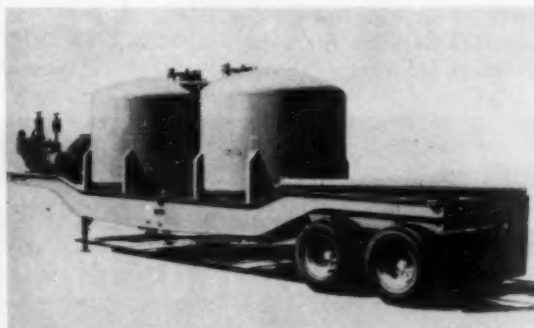
It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover



Dry bulk materials trailer from Nordic Trailer Co., Detroit, features air-powered self-unloading and twin-tank arrangement. Models are offered to get the most in size and weight in six major areas of the country. New unit handles such commodities as cement, fly ash, gypsum, dry chemicals, sand, flour and other dry food products.

To get more information, circle 341 on reply card

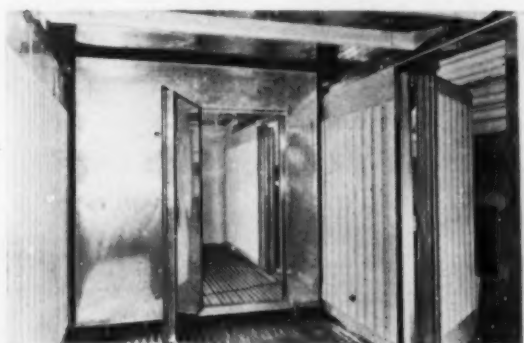


Dry bulk materials trailer just introduced by The Heil Co., Milwaukee, Wis., is a new twin-tank unit equipped for self unloading by air. The Jet-25 is said to unload up to 4000 lb per min through a 4-in. pipe due to a new principle using high pressure with low air volume. The unit also features light weight and quick cleaning.

To get more details, circle 342 on reply card

New model refrigerator vans from Dorsey Trailers, Inc., Elba, Ala., feature rolling meat rails, unloading device and movable partition. Tracks in trailer sidewalls guide roller-equipped meat rails and partition, both of which can be removed when not in use. An optional connector rolls meat trolleys on and off trailer rails.

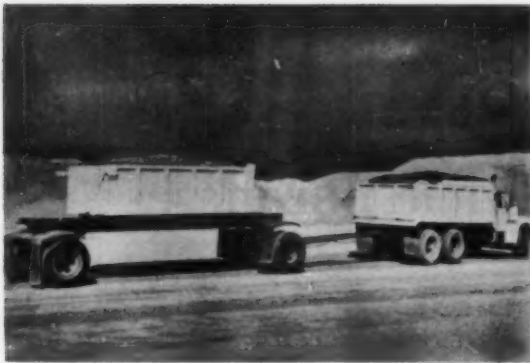
To get more details, circle 343 on reply card



Multi-purpose, 40-ft possum-belly trailer is the Converta-Van from Highway Trailer Industries, New York City. It converts from a livestock hauler to a dry-cargo van. Dual drops and multi-level floor arrangements add 40 ft of deck space. Smooth side walls allow rapid cleanup, provide for safe, dry cargo. Air vents have sliding aluminum covers.

To get more information, circle 344 on reply card





Hydraulic-powered transfer trailer can be teamed-up with any standard 10-wheel dump truck, says maker, Challenge-Cook Bros., Inc., Los Angeles, Cal. One truck with one driver can haul and dump two loads instead of one. Combined payload of truck and transfer trailer is over 26 tons. Transfer trailer is easily uncoupled at dump site. After truck load is dumped, hydraulic mechanism pushes the trailer body inside the dump truck body. The truck then dumps the trailer load. After dumping the trailer load, the truck then returns to the trailer running gear and rolls the trailer body back in place. The transfer trailer is again coupled to the truck for return trip.

For more information, circle 345 on reply card

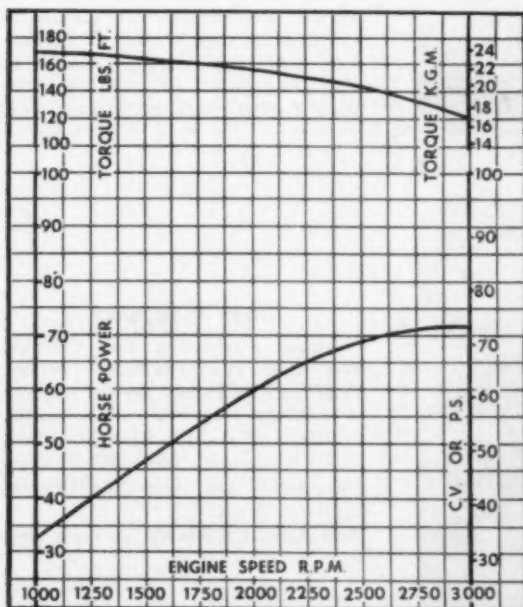


Bottom-dump semi trailers and trains in a new series from Challenge-Cook Bros. are said to provide fast load-travel-dump cycle. Trains in the C-B series are legal with up to 28 ton payload and are primarily for over-the-road hauling with any suitable two-axle tractor. Semi trailers are for off-highway use hauling up to 45 tons with 2- or 3-axle tractors. They can also be used to haul on-highway loads up to 20 tons. Both are available with either spreader or window-type clam gates and full-air cab controls. Both trains and the semi trailers can be loaded and unloaded on-the-move. Working with stationary or belt-type loaders, they are said to be ready to move in a matter of seconds.

For further details, circle 346 on reply card

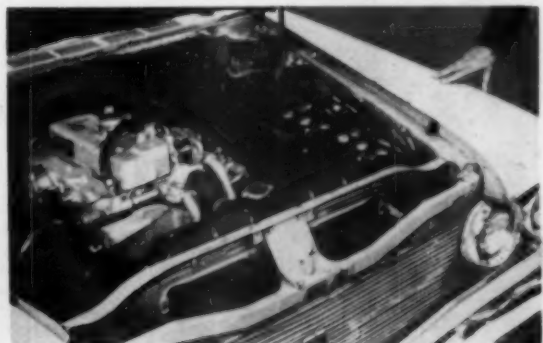


in engines



Diesel power for taxicabs is provided with the Chrysler-Perkins diesel engine. Recent tabulation of two years of on-the-road tests of diesel-powered taxicabs is said to have revealed outstanding economy records. Operating costs of test fleets are cut just about in half, according to reports. Chrysler-Perkins engines are available in Plymouth and Dart taxis as a complete Chrysler package. The Model No. P4-203 engine has been built for taxi service and specially engineered for quiet operation, says Chrysler. It has no carburetor, spark plugs, coils, points, distributor or ignition wiring. The 72-hp, 4-cyl, 4-cycle engine has a 3.6-in. bore, 5 in. stroke, 203 cu in. displacement and is liquid-cooled. The transmission hooks to a standard 3-speed manual and the engine is built so that it is interchangeable with present Plymouth engines.

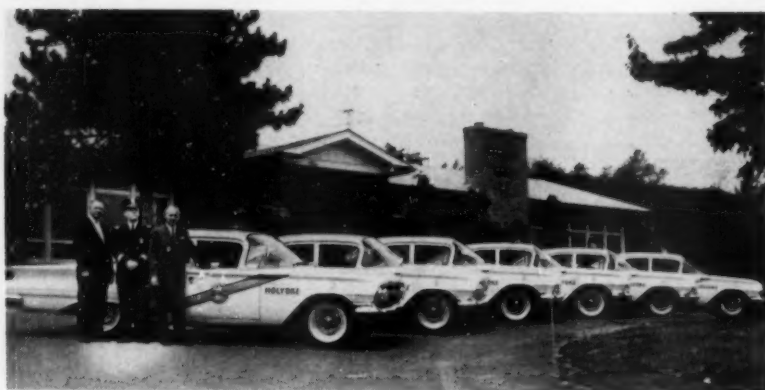
To get more details, circle 347 on reply card





in fleet vehicle purchases

It's easy to get more details about the items described.
Just fold out and use free reply cards inside back cover



Traffic's Quiet in Holyoke

There's not much speeding in Holyoke, Mass., since the police started cruising in bright-colored Chevrolet "Blue-Ribbon" police cruisers. The new cars are quickly spotted by motorists. Result—few traffic violations. More details? Circle 490 on reply card



On End for Volume

Loads of Living room furniture have been increased from 24 to 40-48 sets per trailer by International Furniture Co., Corona, Cal. To increase payload, the company uses a standard 13 ft, 6 in. high Fruehauf Volume-Van. Sofas and chairs are stacked on end, two-deep. More details? Circle 491 on reply card



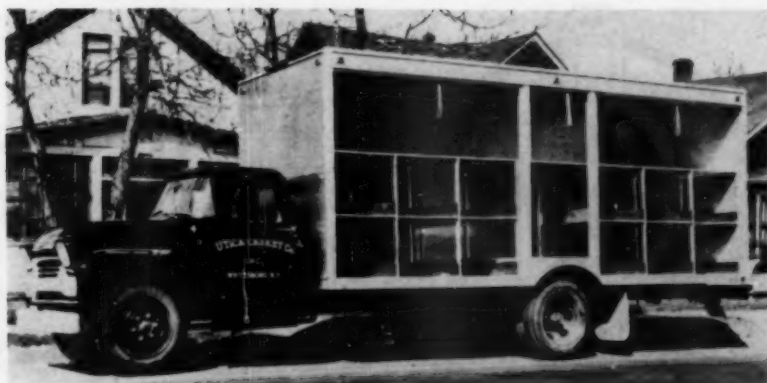
Daily Piggyback

Clipper Carloading Co., Chicago, uses these 35-ft Fruehauf "Volume Vans" in direct daily service between 19 terminals from east to west coasts. Features of the van include a one-piece leak-proof roof, S-2 underconstruction and Aero-Quip General Logistics Track. More details? Circle 492 on reply card

Casket Carrier

Utica Casket Co., Whitesboro, N. Y., had this aluminum beverage body, from Lyncoach & Truck Co., Oneonta, N. Y., modified to suit its use. The 20-ft-long, 8-ft-high unit has three overhead doors on road side for loading and unloading of caskets. Fourteen compartments hold caskets, leave a clear upper deck with 33½-in. clearance to the ceiling.

More details? Circle 493 on reply card



Wolfwagons Work in Pairs for Double-Duty

Mobil Oil Co.'s Kansas City division purchased these Wolfwagons from St. Louis Car Co., St. Louis, Mo. The trucks operate as both over-the-road and city pick-up and delivery units. For over-the-road service, two units are coupled together so that engines and transmissions on both are operated by one driver.

More details? Circle 495 on reply card inside back cover



Compatible Highway-Rail-Sea Container System

Railway Express Agency reports that tests of a new compatible highway-rail-air container system have been successful. The recent two-week test provided daily highway-rail-highway containerized movement of express shipments both ways between New York City and Pittsburgh, Pa., via Pennsylvania Railroad. Railliner, Inc., Birmingham, Ala., supplied the 8 x 8 x 20-ft containers and other special equipment used in the trial operations.

More details? Circle 494 on reply card inside back cover



From Japan to Texas by "Stricktainer"

Two "Stricktainers," with a combined payload of 25,000 lb of rugs, were delivered this month to Norman & Schaeen, rug brokers, Dallas, Texas. The rugs left Kobe, Japan, in bond under custom seal, aboard ship. On arrival in San Francisco, the shipment was unloaded without need for customs clearance and dispatched immediately to Dallas for delivery. Shown is one of the "Stricktainers," made by Strick Trailer Corp., Philadelphia.

More details? Circle 496 on reply card inside back cover





in buses

It's easy to get more details about the items described.
Just fold out and use free reply cards inside back cover



Flexible line offers modern design

COMpletely new design plus a wide choice of standard specifications are important points for consideration in the 1961 passenger coach line from Flexible Co., Loudonville, Ohio.

Display models of the all-new line of transit and suburban coaches were shown recently at the American Transit Assn. convention in Philadelphia and at the National Assn. of Motor Bus Operators convention in Boca Raton, Fla. They met with general acceptance and approval from the bus fleet operators in attendance.

The exterior view shown above is similar in both suburban and transit models . . . chief exception being a side exit door present in transit but not in suburban coaches. Both types are available for either 45 or 53 passengers in lengths of 35 or 40 ft.

For further details on the 1961 line from Flexible, circle 319 on reply card

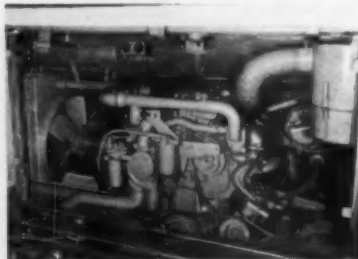
Transit coaches are 102 in. wide, suburban are 96 in. wide.

All models have panoramic, double-bay, sliding-sash windows with escape feature. Standee windows are dark tinted glass. The windshield features six sections of all-flat glass to reduce

glare reflection, provide driver with clear view in all directions.

Engine

The GM-6V-71 diesel engine used in both suburban and transit coaches is mounted lengthwise in the rear. As shown here, this eliminates "V" drive, provides easy accessibility of all engine accessories. The GM-6V-71 is rated at 210 hp at 2100 rpm.



Transmissions

Transit models feature the Spicer Turbomatic 3-stage torque converter transmission while suburban have the Spicer sliding gear. Maximum road speed for transits is 47 mph. For suburban coaches, top speed is 61 mph.

Better products, *faster*, from your BCA distributor:



Nearly all fleets profit from standardizing on BCA

There are those that can't, naturally, and we're sure they would if they could. But if your fleet uses wheels, generators, clutches, transmissions, differentials, starter motors, or power steering, you will most certainly profit from standardizing on BCA ball bearings. And there are many good reasons why.

Over 50 years of BCA know-how pays off on the road in reduced downtime. Perfect quality control starts in the steel and carries through to design and manufacturing. And you get delivery on BCA ball bearings *when you need them*. So call your BCA distributor for the facts right now. It really pays.



BCA BALL BEARINGS

FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc. • Detroit 13, Michigan





in vehicle accessories

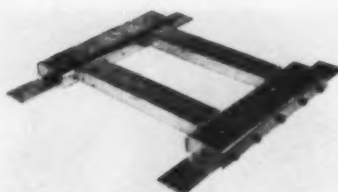
It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover

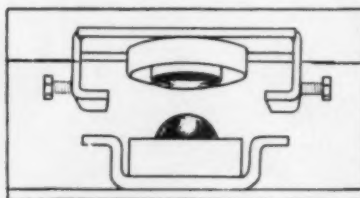
Ball cushion fifth wheel mount from Inertia-Matic, Inc., Watertown, Mass., is a floating fifth wheel suspension which absorbs shock. This will interest you because of its safety and maintenance-saving features. In addition, if your fleet hauls fragile cargoes, such as electronics gear or bulk products, it might well answer problems of cargo damage and shifting load.

The mount replaces the regular fifth wheel mounting plate (as pictured at right). Steel balls, similar to large ball bearings, ride in races between the upper and lower plate (as pictured). These allow the load on the fifth wheel to "float" on the balls. Movement of the balls in the races absorbs shock between trailer and tractor.

In starting, the trailer overcomes its own inertia first before taking up the



trailer load. This gives smoother and faster acceleration. In fast stops, it transfers forward momentum of the trailer from the horizontal to the



vertical plane. Body and load roll forward on the balls for the full length of free travel, then mount the curvature of the races. Gravity cushions the energy transfer before it reaches the brakes. Force of the forward motion is cut up-to-75 per cent during maximum braking.

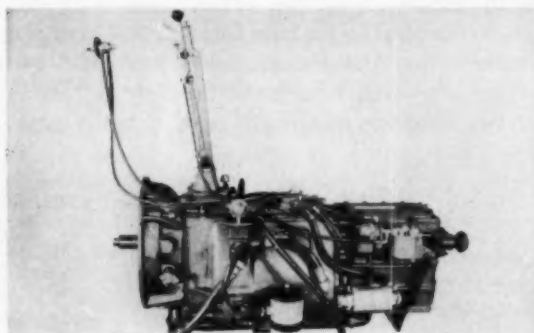
Because the balls can roll slightly in all directions, they can absorb shock in all directions — not just vertically as leaf springs do. Other advantages are said to be longer tire life, better fuel mileage and lower maintenance costs.

The Ball Cushion Fifth Wheel Mount is an outgrowth of the highly successful Inertia-Matic body mounts for dump trucks. Offered as a "package", it can be installed with outriggers or U bolts by one mechanic in less than four hours.

More details? Circle 404 on reply card

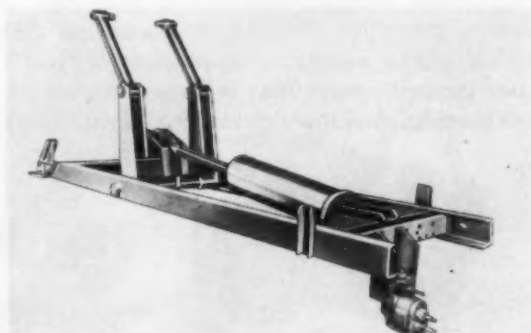
Transmission for extra-heavy-duty off-highway use is the Model No. R-1750 RoadRanger from Fuller Mfg. Co., Kalamazoo, Mich. Nine forward gear ratios are selected with one lever. Two reverse speeds are provided. Jet spray lubrication system pressure-feeds filtered oil to front and rear sections. Countershaft inertia brake allows quick upshifts.

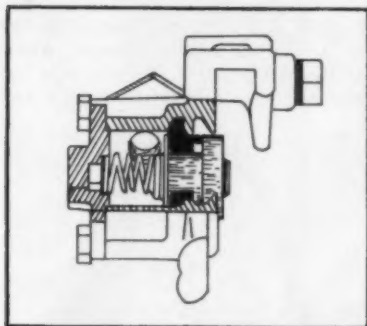
For more details, circle 348 on reply card



Heavy-duty underbody hoists in both single and twin-cyl models have just been introduced by Perfection Steel Body Co., Galion, Ohio. Single-cyl hoists come in either 7- or 8-in. diameters with 25-in. stroke. Capacities are 26,000 and 34,000 lb. Twin-cyl models have 6-, 7- or 8-in. diameters with maximum capacities of 32,000, 42,000 and 48,000 lb.

To get more details, circle 349 on reply card





Protected brake systems from W. L. Keehn, Santa Rosa, Cal., now feature "Automatic Glad Hands" (pictured above). They are installed on the service line and on the main air line to the trailer, eliminate the possibility of the driver not opening the shut-off valves. The new glad hands are used with three Keehn protected brake systems.

Vehicle-powered emergency brake

system for air-braked vehicles works through an hydraulic piston in the brake diaphragm. It's offered by Knowles Brake Co., Huntingdon Valley, Pa. It can be used on straight trucks, buses or combinations . . . through a flexible line and hydraulic coupling (see drawing). Control is through a cable-controlled 4-way valve. Cable control can be dash-mounted or connected to emergency brake lever. Power comes from cam on differential pinion shaft operating a piston. It's actuated when cable

First is the Protected Air Tank Emergency System which protects a tractor even when the trailer is not connected. It also automatically applies tractor and trailer brakes if air pressure drops below safe limit and makes it impossible to set tractor brakes before the trailer brakes start to apply.

Second protected system is for use with spring brakes. Used with the Automatic Glad Hand, it allows the emergency features of the brakes to be controlled from one valve. It also allows the release system to work on the tractor with the trailer disconnected. Trailer tanks are automatically charged by releasing the tractor brakes. An auxiliary Co. brakes release system (May, pg 203) can also be used with the automatic glad hands.

For more information:
circle 354 on reply card

control is pulled on. This supplies necessary push for hydraulic fluid in accumulator (reservoir) to feed into line and operate piston in the brake diaphragm. Maker says it meets ICC emergency brake requirements. In partially on position, system acts as a retarder. With cable control in off position, hydraulic fluid flow is reversed so pinion shaft cam-operated piston, pumps fluid back into reservoir . . . until pressure is off diaphragm-mounted piston. Reduced pressure then causes pinion shaft piston pumping action to cease.

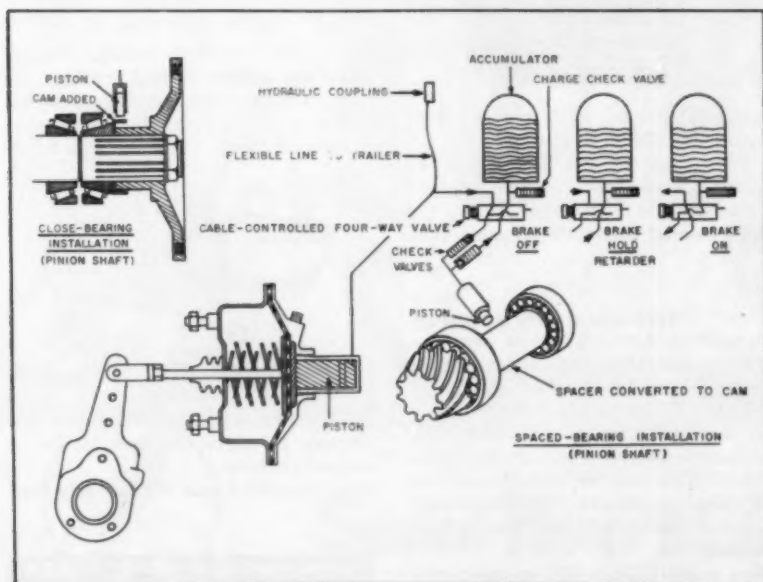
More details? Circle 323 on reply card



Electric retarder

for trucks and buses is now offered by the Electro-Mechanical Div. of Lear, Inc., Grand Rapids, Mich. As shown in the illustration above, it fits in the drive line between transmission and rear axle, requires only the battery for operation. No water, oil or air is used. Heat is dissipated through fins cast into the discs on each end of the retarder. Retarder is controlled by a 4-position lever mounted on the steering column. Performance-wise, Lear says the retarder will hold a 14-ton truck at 22 mph on a nine per cent downgrade. In tests, it has slowed a truck from 47 to 6 mph in less than 220 yd. Retarder is offered in four models in 12 and 24-volt types for vehicles with gross weights ranging from 12,000 to 70,000 lb. Retarder weight goes from 220 to 700 lb depending on size. Average current absorption is from 4 to 8 amp/hour—depending on size. The Lear Electric Retarder works on the eddy current principle. The stator is mounted to the vehicle chassis with the rotor on the drive line. When actuated by the cab control, a series of electro-magnets on the stator are energized sending current through the retarder. The 4-position controller permits partial or full operation. A magnetic field between the two discs in the rotor gives the retarding action.

More details? Circle 324 on reply card

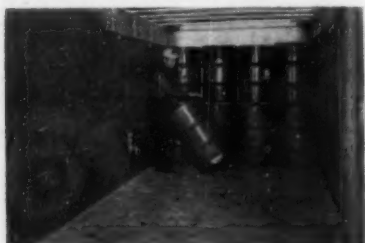




in vehicle accessories

Continued from Page 125

Truck floor panels are said to have greater surface impact strength. The new Poly-Rock surfacing panels from Truck Floor Division, Plant Maintenance, Inc., Cleve-



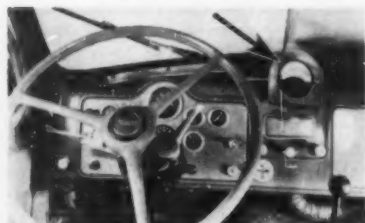
land, Ohio, also provide non-slip, acid-proof and oil-proof surface, says the maker.

More details? Circle 334 on reply card

Cargo tie-down system called Load-Holder is from Cargo Stabilizing Devices, Inc. Spring-loaded telescoping steel tubes snap into perforated hat-section belt rails. New feature is an adjustable section that permits a 16-in. length variance in the brace rod.

More details? Circle 337 on reply card

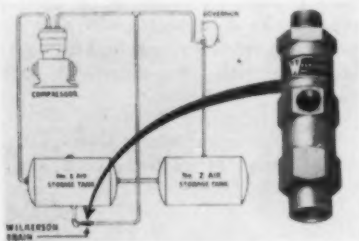
Exhaust pyrometer made by Alnor Instrument Co., Chicago, is said to lengthen diesel life. The new pyrometer is designed to protect diesel engines and turbochargers



by monitoring exhaust temperatures. An indicator installed on the vehicle dash reflects temperatures relayed from a thermocouple either in the exhaust manifold or at the turbocharger discharge pipe.

More details? Circle 400 on reply card

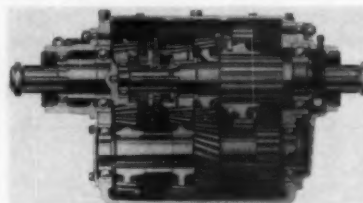
Air tank drain designed for tanks on air brake systems of vehicles and air suspension systems is now available from Wilkerson Corp., Englewood, Colo. The



company claims that Saf-T-Drain automatically drains all water, oil and sludge from compressed air tanks.

More details? Circle 335 on reply card

Auxiliary transmissions for medium and heavy duty trucks in two new 4-speed models have been announced by Fuller Mfg. Co., Kalamazoo, Mich. The Model No. 4-B-73 is



designed for use with engines producing 500-600 lb ft of torque.

The Model No. 4-B-75 has high-capacity bearings for use with engines in the 600-700 lb ft torque class.

More details? Circle 338 on reply card

Mechanical refrigeration units from Arctic Traveler are electrically operated and automatically controlled for temperatures as low as -20 deg F. Power units are available for LP gas, gasoline or diesel fuel. Automatic winter heat is also provided. "Truckmaster" models are for all straight trucks. "Trailmasters" are for trailers of any size or capacity.

More details? Circle 401 on reply card

Burglar alarm for trucks, trailers and passenger cars is said to be a new bank-type system. Automatic Products Co., Chicago, says the system protects both the vehicle and



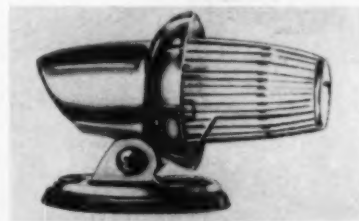
its contents from theft. It employs a reliable "hair-trigger" action without danger of false alarm.

More details? Circle 336 on reply card

Nylon tire valve stops valve stem swallowing during blow-outs, says maker Allied Chemical Corp., New York City. The Glo-Cap tire saver is made of fluorescent nylon, is also said to prevent damage to valve cores and prevent valve stem from pulling into the tire.

More details? Circle 339 on reply card

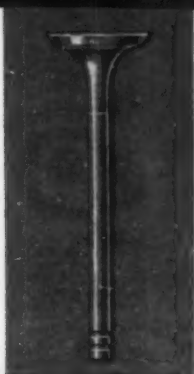
Cab marker lamp from Signal-Stat Corp., Brooklyn, N. Y., features "Shockmount" assembly which is said to isolate bulb and socket from road shock. The Model No. E13M



is die-cast and finished in triple chrome. Its adjustable base fits flat or curved surfaces.

More details? Circle 402 on reply card

TURN PAGE. THERE'S MORE

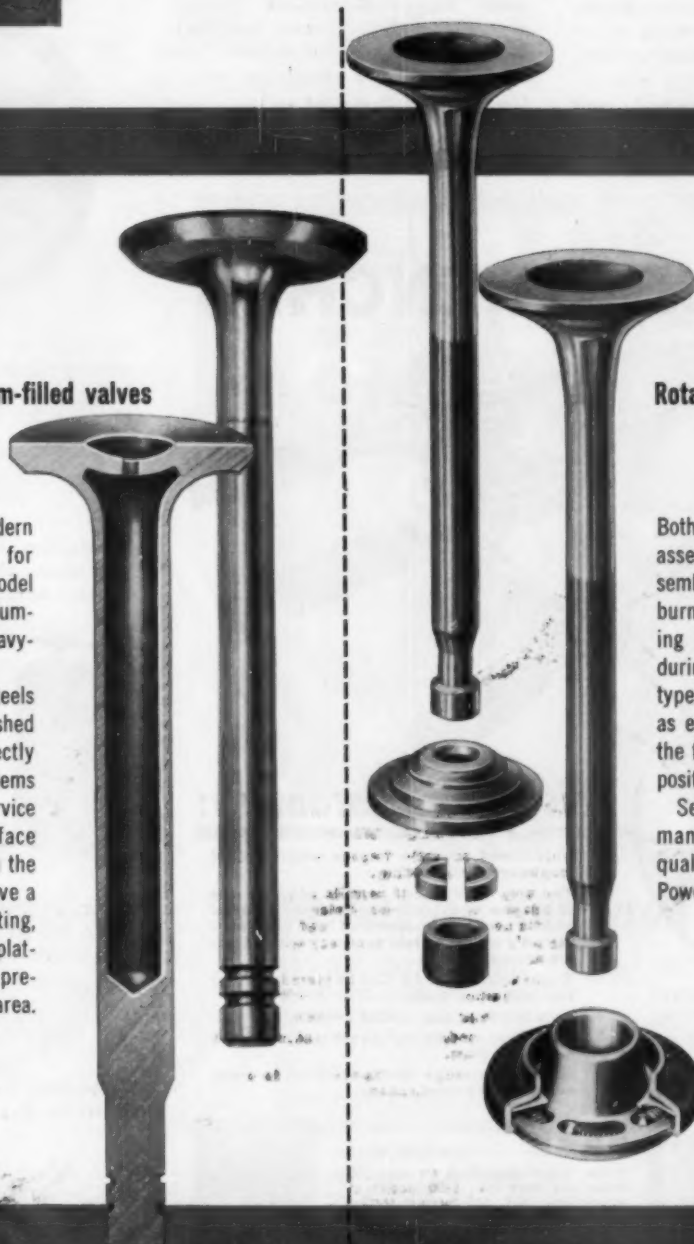


A valve line that matches the quality and performance of Sealed Power Piston Rings

Conventional and sodium-filled valves

A complete line of all modern types—a correct design for every engine make and model requirement, including sodium-filled valves for severe, heavy-duty service.

Only the finest grade steels are used. Stems are finished extremely smooth, perfectly straight. Sealed Power stems positively stand up in service because of special surface treatments. Depending on the application, stems may have a phosphate anti-scuff coating, shot peening, or chrome-plating. Extra hard stem tips prevent wear in this critical area.



Rotating valves

Both free valve and roto-cap assemblies. These valve assemblies reduce to a minimum burning, guttering, and sticking by rotation of the valve during engine operation. Both types assure superior sealing as each time the valve turns, the face is wiped clean of deposits.

Sealed Power valve parts are manufactured to the same quality standards as Sealed Power valves.



Sealed Power Motor Parts

SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Preferred Performance

PISTON RINGS • PISTONS • PISTON PINS • SLEEVES AND SLEEVE ASSEMBLIES • TAPPETS • WATER PUMPS



vehicle accessories

Continued from Page 126

Lubricating oil is specially engineered for LP-gas and natural-gas engines by Lubrication Engineers, Inc., Fort Worth, Texas. The new LPG engine oil is available in weights ranging from SAE 10 to SAE 50.

More details? Circle 414 on reply card

Dry bulk cement hose permits hauling of the product in tank trucks similar to those that haul gasoline, says maker B. F. Goodrich, Akron, Ohio. A woven canvas wall divides the tank horizontally. The top compartment holds up-to 800 cu ft of dry cement. The lower compartment remains empty. For unloading cement, air is forced into the empty lower compartment. The air passes through the canvas and floats the cement through the delivery hose at the rate of five barrels per min.

More details? Circle 415 on reply card

Flexible-strap reflector from Auto Lamp Mfg. Co. provides flexible mounting for trucks, tractors and other heavy equipment. The Pathfinder Model No. 38 is a flexible rub-



ber unit molded to form a tough shock cushion with strap and 3¼-in. lens rim. Flexing the rim "pops-out" the lens for quick replacement.

More details? Circle 416 on reply card

TORQUE WRENCHES



This Mark* Guarantees:

1. Guaranteed accurate forever within 2% of maximum scale reading.
2. The only wrench that permits accurate use of adapter & extensions. Patented pivoted handle permits concentrated load position—the only way to obtain accuracy with adapters and extensions.
3. Rugged construction. Can be stored in a tool box with other tools.
4. Easy to use as any socket wrench.
5. Signalling models and direct reading styles to choose from.
6. A complete range to choose from to meet every service application.

*These are the same torque wrenches used and recommended by leading engine and equipment builders.



Valve and Clutch Spring Tester

Test new as well as used springs. Match sets of valve springs for top engine performance. Check clutch springs to prolong clutch life.

● More details? Circle 170 on reply card inside back cover

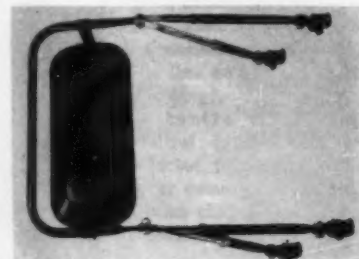
FREE

Torque Specification Book for over 130 makes and more than 1200 models of automobiles, (U.S. and foreign) trucks, tractors, outboards, motorcycles, diesel, aircraft, marine and small air cooled engines. Spark plug, wheel bearing, valve spring data and many helpful torque tips sent free upon request, write Dept. 600.



PA **STURTEVANT CO**
ADDISON **QUALITY** ILLINOIS

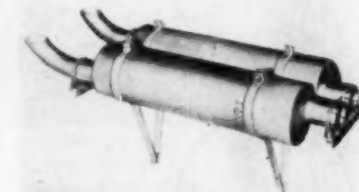
Mirror glass called Vista-Lens reduces sun and high-beam reflections, according to the maker, Arrow Safety Device Co.,



Georgetown, Del. It's also said to shed water and to produce clearer images with greater depth, even at night.

More details? Circle 417 on reply card

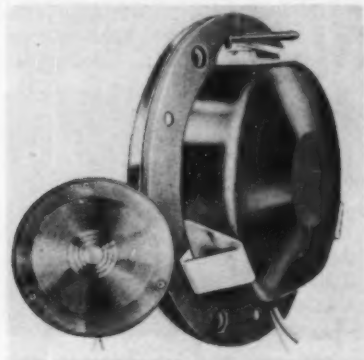
Dual muffler kit for White 3000 series engines with 386-451-cu in. displacement is now avail-



able in the "Engine Mated Sound Sentry" line of mufflers from Alexander-Tagg Industries, Inc., Hatboro,

Pa. It's said to provide 35 per cent less back pressure, 25 per cent less noise, lower exhaust temperature and longer muffler and manifold exhaust pipe life. The ATI W-451 dual muffler kit contains all necessary parts for easy conversion from present muffler. **More details? Circle 418 on reply card**

Stop-tail-and-directional truck lights with Class A reflex reflectors have just been announced by Auto Lamp Mfg. Co. The 5½-in. units are said to be designed for flush



mounting without screws, clips or retainers. Three metal tension snaps secure the Model No. 465 lamp firmly in a 4½-in. hole. They're said to be shock, vibration and dust-proof.

More details? Circle 419 on reply card

Trailer brake emergency valve for use in trailer air brake systems has just been introduced by Berg Mfg. & Sales Co., Chicago. The new

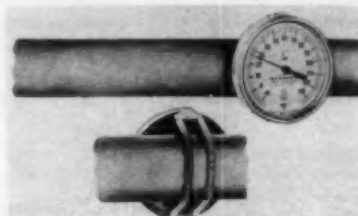


Relay Emergency Valve is interchangeable with other valves. It's available with either four or six brake chamber outlets.

More details? Circle 420 on reply card

Pipe thermometer gives reading of pipe surface temperatures. It clips to any pipe by

means of two spiral spring clips without need for branching or drilling. Abrax Instrument Corp., Jamaica,



N. Y., makes the thermometers to fit pipes up to 3½ in. in diameter. Two

temperature ranges are available — Model No. APFT 460 for +32 to 320 deg F and Model No. APFT 461 for -14 to +134 deg F.

More details? Circle 421 on reply card

Single axle power divider for 4-wheel trucks assures positive traction under adverse conditions, says maker Mack Trucks, Inc. The Mack Model No. CRD 781 power divider differential is said to main-

(TURN TO NEXT PAGE, PLEASE)

NEW



FROM
CENTURY


350 H. P.

M-5

CONVERTER

...FOR MEDIUM AND HIGH H.P. ENGINES

- ★ **350 H.P. CAPACITY PLUS**
New internal design features including special surface treatment of aluminum housing permits this high H.P. output
- ★ **ONLY 6 INCH IN DIAMETER**
New space saving advantages. The M-5 is the smallest size converter of this capacity available
- ★ **EASIER STARTING**
A newly designed compound leverage system provides high sensitivity without increasing size of diaphragm
- ★ **MANY MORE NEW FEATURES ... WRITE FOR COMPLETE DETAILS TODAY**



Export Sales: 3-in. Plus Automotoren Div.
Singer Products Co.
95 Broad Street
New York 4, N. Y.

CENTURY GAS EQUIPMENT
Marvel-Schebler Products Div.
Borg-Warner Corporation
Decatur, Illinois



vehicle accessories

Continued from Page 129

tain the driving element's constant average speed at the wheels. As one wheel turns faster than the driving element, the other turns proportionately slower. Automatic action of the power divider prevents wheel spinning and stalling.

More details? Circle 422 on reply card

Lined bands for automatic transmissions are now available from Raybestos-Manhattan, Inc., Bridgeport, Conn. Lining on the bands is said to be the same as that supplied by the maker to original equipment manufacturers.

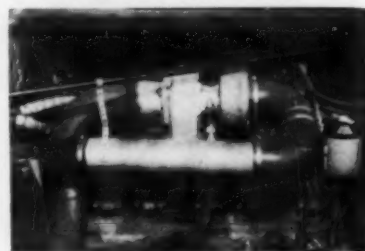
More details? Circle 423 on reply card

Rear wheel torque divider called Powr-Lok prevents loss of power in both rear wheels when one is spinning on ice, mud or snow.

It's available from GMC Truck & Coach Division in its 4-wheel-drive models. The device automatically shifts power to the rear wheel with the greater traction. It may be obtained for conventional, light-duty GMC's.

More details? Circle 424 on reply card

Compact turbocharger is the new Model No. T-1104 from Airesearch which replaces the older model for standard installation on Cummins NH series diesel truck engines. Though it weighs only 38 lb, the smaller model is said to provide the same engine power boost and accelerate faster than its predecessor.



Maker says the new compact unit eliminates exhaust smoke, is more economical and easier to install. Standard adapters permit installation of the turbocharger on exhaust manifolds of either naturally aspirated or turbocharged engines. As shown, note ample space between turbocharger and engine hood.

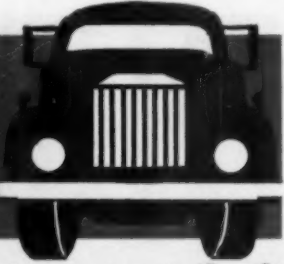
More details? Circle 425 on reply card

Disposable filter cartridge for diesel engines is called Micro-Wynd by maker Cuno Engineering Corp., Meriden, Conn. Its manufacturing process is said to employ a separate filtering medium that is interwoven between the structural



spiral winding. Cartridge ends are wound square with the core axis to permit any number of cartridges to be assembled end-to-end in tiered arrangements without sealing devices,


Your fleet takes a
CONSTANT BEATING!



make sure the ignition system can take it

P&D-IZE

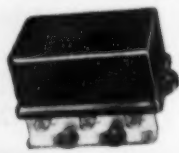


regularly!




The largest percentage of passenger car repair jobs are caused by ignition failures. With trucks, buses, tractors the toll is even greater. The only answer is to P&D-ize on every tune-up.

P&D gives you a complete line of genuine parts warranted on each job. P&D gives you *service* you can trust, *reputation* you can rely on—more hours on the road, less time in the shop.

Join the crowd, get the P&D-ize habit. It pays! Send for a P&D technical book or ask your jobber.



P&D MANUFACTURING CO., INC.
STARTING - LIGHTING - IGNITION
19-02 STEINWAY ST., LONG ISLAND CITY 5, N. Y.
Export Sales: Borg Warner International, 36 So. Wabash Ave., Chicago 3, Ill.

when inserted in a suitable filter housing.

More details? Circle 426 on reply card

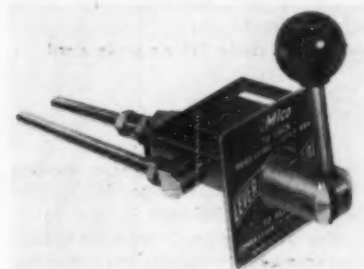
Carburetor air cleaner is a new permanent type from Dust-O-Matic Filter Sales Co., Detroit. The Dust-O-Matic air cleaner is for any truck or automobile engine, 1957 or



later model, using disposable paper filters. The unit is washed in kerosene, naphtha or fuel oil. The flexible, foamed plastic filter is squeezed dry and reinstalled after cleaning.

More details? Circle 427 on reply card

Brake lever lock is the Mico Lever Lock made by Minnesota Automotive, Inc., Mankato, Minn. The new hydraulic accessory is said to assure positive, recommended



braking pressure while the vehicle is parked. It's manually operated. Operator raises lever and steps on foot pedal to supply holding power.

More details? Circle 428 on reply card

Citizens Band 2-way radio from RCA provides low-cost communications hookup for borough and township police and fire departments. The RCA Mark VII Radio-Phone measures just 5 x 12 x 8 in., has four crystal-controlled channels for transmitting and receiving and a tunable

receiver covering all 23 channels in the Citizens Band. Power source can be either 115-volt AC or a 6 or 12-volt battery.

More details? Circle 429 on reply card

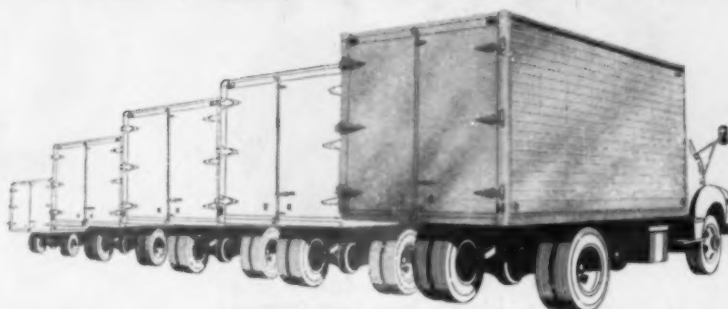
Portable fluorescent light for truckers plugs into the cigarette lighter. Only 18 in. long it provides light for after-dark emergencies without danger of fire or explosion from lanterns. Maker says it uses less



power than parking lights, comes with 15-watt tube and 35-ft cord.

More details? Circle 430 on reply card

OUTSTANDING!



LYN ALUMINUM TRUCK BODIES!

Outstanding performance—LYN bodies carry bigger payloads because LYN superior design provides greater cargo space; what's more, LYN lightweight aluminum reduces deadload up to 40%!

Outstanding durability—LYN superior construction insures a 100% leakproof body with greater strength designed into every point of stress to *completely eliminate* racking, drumming or ballooning! LYN bodies last longer!

Outstanding beauty—LYN aluminum bodies are rust-proof, easy to keep clean and bright... never need painting.

Outstanding economy...LYN bodies cost less to buy, less to assemble, less to maintain!

See your LYN dealer. Compare LYN bodies. Find out how LYN aluminum truck bodies give your fleet outstanding performance... outstanding beauty... with real economy of first cost and operation!

Call your nearest LYN dealer, or write Charles MacLean, Sales Manager.



LYNCOACH & TRUCK CO., INC.

Dept. C

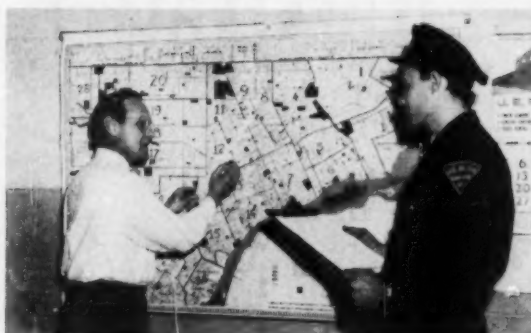
Oneonta, N. Y.



in shop equipment

It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover

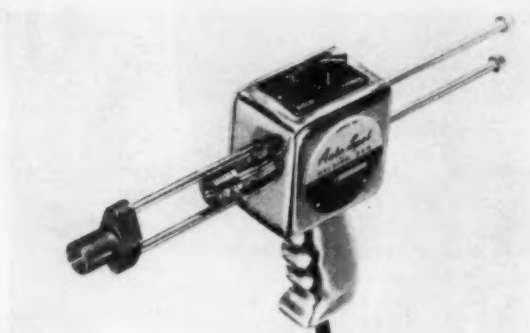
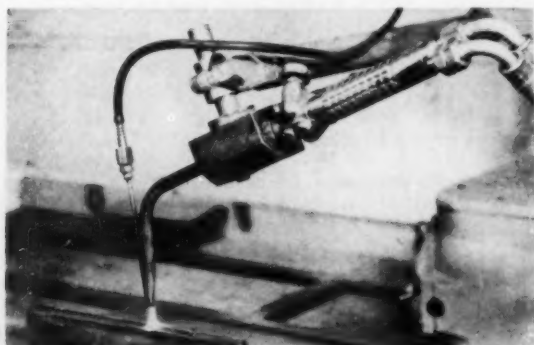


Trucking industry maps made by Hearne Bros., Detroit, have been improved this year, maker claims. Size of the maps has been increased from 44 x 63 in. to 50 x 68 in. Type sizes are 20 per cent larger. All maps are printed in six colors... streets in black, numbers in reds, main routes in magenta, etc. Surface is of cellulose.

For further details, circle 350 on reply card

Metal-to-metal surfacing process called Aircospray is new from Air Reduction Co., New York City. Designed for hardfacing and brazing operations, Aircospray simultaneously sprays and fuses powdered metals on a base metal with an oxy-acetylene flame. Various models and tips permit the unit to be tailored to user's needs.

To get more details, circle 352 on reply card

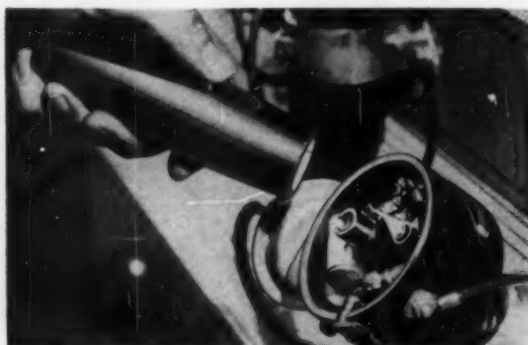


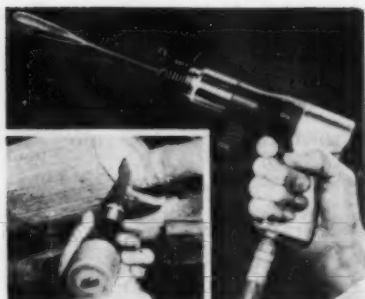
Spot weld gun is the Automatic Arc Model No. 90 from Bren Weld Corp., Brooklyn, N. Y. The new gun welds from one side... when it's just pressed against the work the arc starts and the electrode is fed automatically. When welding operation is completed, the gun shuts itself off and is automatically reset.

To get more information, circle 351 on reply card

Remote engine starter switch just introduced by Kal-Equip Co., Otsego, Mich., features a built-in trouble light. The unit is said to be ideal for tight jobs like working on distributor points. The new switch is guaranteed to handle even the big ones. Contacts are extra-heavy duty and double silver-plated.

For more information, circle 353 on reply card

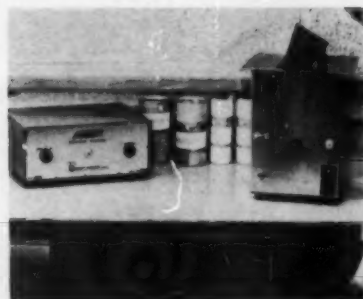




Heavy-duty air hammers from Thor Power Tool Co. are new SpeedGun Model Nos. HM1P (short-stroke) and HM3P (long-stroke). More details? Circle 325 on reply card



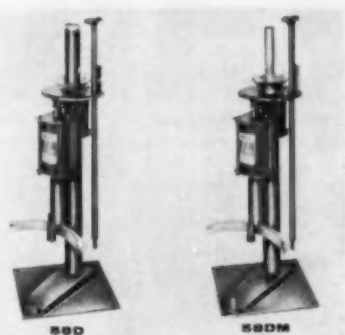
Transmission handler is the new portable hydraulic-powered Ausco Model No. A10-9 from Auto Specialties Mfg. Co. More details? Circle 326 on reply card



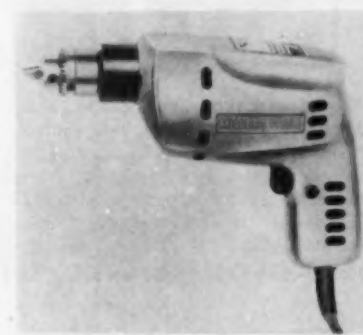
Ultrasonic cleaning system for small parts is the Model No. LG-75 from Branson Industries, Inc. It has a compact 75-watt generator. More details? Circle 327 on reply card



Engine oscilloscope has plug-in timing light requiring no leads. The Model No. 904 Ignition-Scope is from Du Mont Laboratories. More details? Circle 328 on reply card



Two new tire changers from May Bros. Mfg. Co. are air-powered and compact. Accessory tools come with both models. More details? Circle 329 on reply card



Shockproof nylon drill is double-insulated, lightweight. The Model No. 1144 Safe-T-Drill is a new item in the Millers Falls line. More details? Circle 330 on reply card

THERE'S MORE

Truck washer from Tucker Mfg. Co. has telescopic handle and valve-controlled detergent dispenser. More details? Circle 331 on reply card



High-pressure cold water gun for new or existing Malsbary steam cleaners facilitates switching from hot solution to cold water blast. More details? Circle 332 on reply card



Fuel pump tester is the hand-held Kal-Pump Tester from Kal-Equip Co. It's said to give instant pints-per-minute reading. More details? Circle 333 on reply card



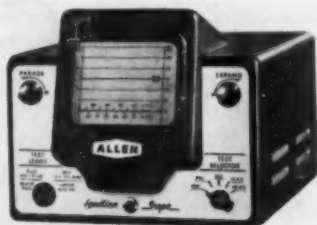


in shop equipment

Continued from Page 133

Ignition tester

called the Allen 3/2 Scope is said to provide more tests, fewer controls and simplified circuitry. Made by Allen



Electric & Equipment Co., Kalamazoo, Mich., it features just two controls, three external connections, dial test selector and a new device to insure pattern stability without need for adjustments. It also features a color-coded hookup.

More details? Circle 405 on reply card

Hot work

is easier to handle with this new cotton asbestos glove for working on hot engines. Available from the Electric



Autolite Co., Toledo, Ohio, the glove fits either hand and saves burnt hands and knuckles when removing spark plugs, spark plug wires, etc.

More details? Circle 406 on reply card

Pin inserter set

from Sunnen Products Co., St. Louis, Mo., comes with adapters for all 1960 passenger car and truck engines. Fleet shops now using the basic Sunnen pin inserter set can add the new adapters to complete their equipment needs.

More details? Circle 407 on reply card

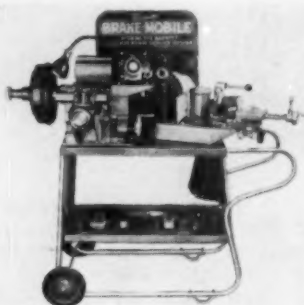
Point setting

tool cuts time of setting distributor-point gaps by two-thirds, says Bingham-Herbrand Corp., Fremont, Ohio, makers. It's the Model No. 2110 "Snap Gap" point-setting tool. Single or dual breaker points can be set perfectly in minutes without rotating engine or removing distributor.

More details? Circle 408 on reply card

Portable brake service

shop is now offered to shops with limited work space for brake shoe and drum service. Barrett Equipment

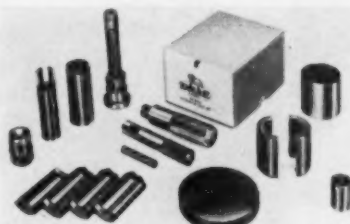


Co. makes the Model No. B-4 Brake-Mobile for complete passenger car and light truck brake service.

More details? Circle 409 on reply card

Alternator servicing

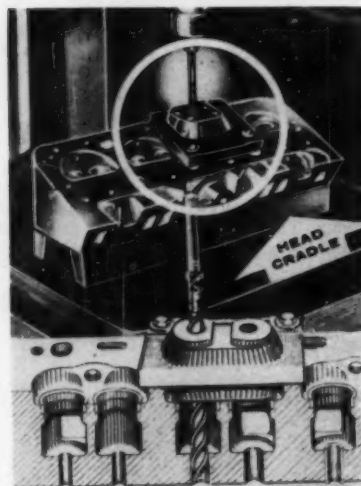
tools for servicing Chrysler products are now available from Draft Tool Co., White Plains, N. Y. Three kits are



offered, all with an illustrated alternator service manual which cover assembly, disassembly and repairs.

More details? Circle 410 on reply card

Valve guide installing tool is said to be adaptable for both drill press operation and ordinary shop drills. Drill jig with bushings is slipped over pilots, then clamped in



place. Pilots are then removed for drilling and reaming operations. Hub City Iron Co., Aberdeen, S. D., has also developed accurate "head cradles" to properly position and align cylinder heads for drill press installation.

More details? Circle 411 on reply card

Welding and cutting

outfit is the complete, medium-sized, full-capacity Marquette Star-Jet. Marquette Mfg. Co., Minneapolis,



Minn., has just announced its availability in a rugged tool box known as the new Redi-Pac.

More details? Circle 412 on reply card

Wire splicing tape

developed by Permcel, New Brunswick, N. J., is a new pressure-sensitive, plastic tape that is said to stay flexible at -50 deg F. Permcel 295 was designed specifically for low-temperature applications.

More details? Circle 413 on reply card

TURN PAGE, THERE'S MORE

PUT IT ON A PEDESTAL

....better yet, put

REYCO BRAKE DRUMS

IN YOUR FLEET

- LOWER COST PER VEHICLE PER YEAR
- MORE DEPENDABLE STOPABILITY
FOR GREATER SAFETY

INVESTIGATE HOW REYCO ENGINEERING GIVES BRAKE DRUMS
MORE STRENGTH THROUGH DESIGN!

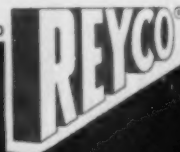
SEE YOUR REYCO DISTRIBUTOR

COPYRIGHT 1961, REYNOLDS MFG. CO.

D-560

REYNOLDS MANUFACTURING CO.

SPRINGFIELD, MISSOURI





shop equipment

Continued from Page 134

Truck-trailer body repairs can be made quickly with only a drill and hammer, according to Southco Division, Lester, Pa. "Rivet-patch" kit is said to permit a professional body patching job with no skill required. Aluminum patches and rivets are included.

More details? Circle 431 on reply card

Cooling systems of all engines can be freed of rust, scale and slime with new Scalene, says maker, Lester Laboratories, Inc., Atlanta, Ga. It's said to be non-corrosive and safe for personnel and equipment.

More details? Circle 432 on reply card

Bolt bin is a handy size for storing various small parts. The unit was specially

designed for automotive use by The Durham Mfg. Co., Durham, Conn. The all-welded heavy-duty steel bin is 42 in. high, 36 in. wide and 12 in. deep. It contains 72 compartments, each measuring $4\frac{1}{2}$ x $4\frac{1}{2}$ x 12 in.

More details? Circle 433 on reply card

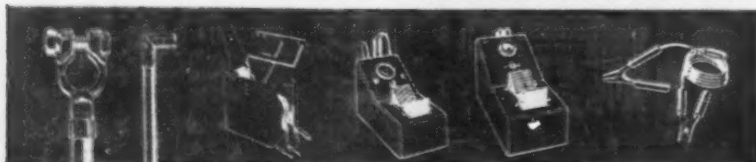
Tool stand features four drawers with sliding trays and a heavy-duty work top. The new stand from Lyon Metal Products, Inc., Aurora, Ill., is mounted on swivel-type casters with composition rubber wheels. The top may be reversed to provide a working tray with



THE ALL-NEW SILVER BEAUTY MODEL 200 CHARGER IS BIG AND BRAWNY—DESIGNED TO HANDLE THE DEMANDS OF TODAY'S DRIVERS FOR FASTER AND BETTER SERVICE

Most practical charger you've ever seen. "Penthouse" contains meters and controls where they are easy to read and protected from weather and bumps. Fully automatic—can't over-

charge. Rates: 100 amps for 6v—60 amps for 12v. And look—no tangles! Cables disappear inside roomy cabinet. Unconditionally guaranteed. Triple-A Specialty Company, Chicago.



EVERYTHING FOR THE BATTERY BUT THE BATTERY ITSELF!

More details? Circle 216 on reply card inside back cover

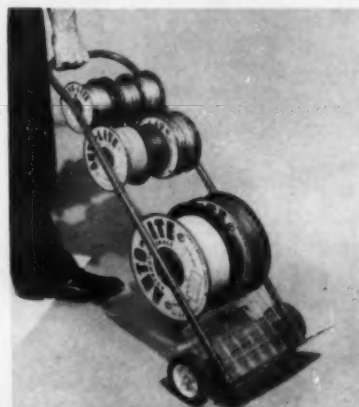


$\frac{1}{2}$ -in. flange all around. Overall size is $22\frac{1}{2}$ in. wide, $20\frac{1}{2}$ in. deep and 34 in. high.

More details? Circle 434 on reply card

TURN PAGE, THERE'S MORE

Wire on Wheels



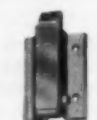
The Electric Autolite Co., Toledo, Ohio, makes this handy new wire and cable cart. It's a smart way to keep your fleet shop's rewiring stock neat and easily accessible. The portable storage rack holds up to 10,000 feet of wire.

More details? Circle 435 on reply card



LEAF-TYPE HINGES

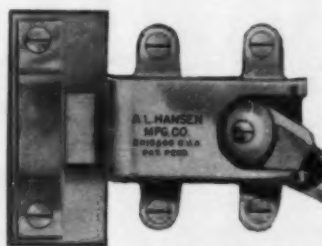
1



2



REAR
DOOR &
SIDE
DOOR
LOCKS



REFRIGERATOR DOOR LOCKS

3



CAB LOCKS

4



SLAMMING,
SLAM-&
TAKE-UP
LOCKS

5



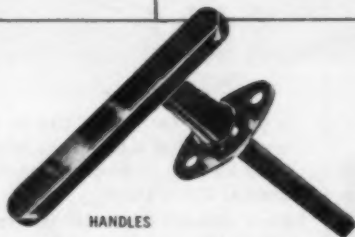
6

WINDOW
REGULATORS



SLIDING DOOR
HARDWARE

7



HANDLES

8

*Insist on this
complete line
for uniform
quality!*

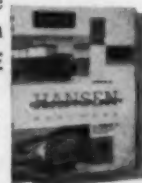
HANSEN

COMMERCIAL BODY

HARDWARE

HERE'S EVERYTHING YOU NEED . . . a complete line of top quality products for quality body builders. HANSEN COMMERCIAL BODY HARDWARE is the sum-total of almost 40 years' experience in meeting the rigid requirements of those who want modern design, dependable performance, easy installation, long trouble-free service. Be sure . . . insist on HANSEN . . . THE HARDWARE FOR HARD WEAR!

WRITE TODAY for your free Hansen Catalog 22.



A.L. Hansen MFG. CO.

5037 Ravenswood Avenue • Chicago 40, Illinois

Makers of the famous Hansen Automatic Tackers, Staplers and Hansen Staples —36 Models and 80 Staple Sizes



shop equipment

Continued from Page 136

Brake drum mike reads accurately, without fluctuation, according to Star Machine & Tool Co., Minneapolis, Minn. The new Model No. 875 precision brake drum micrometer has a spring-loaded drum dial. This is said to lock itself for positive reading of maximum drum diameter with the first movement of

the mike within the drum. The mike has a universal range from 6½ to 18¼ in.

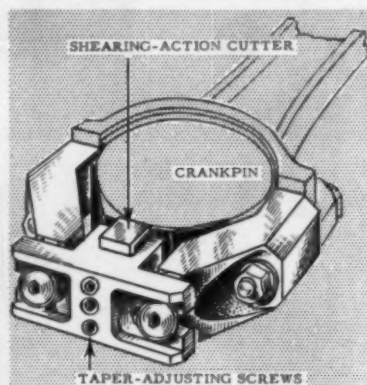
More details? Circle 436 on reply card

Air/water nozzle is a high velocity booster unit with fingertip controls. The Tri-Con booster nozzle permits selection of a wide range of pressures of air or water or both simultaneously. Particularly effective for vehicle and engine clean-

ing and degreasing, it's also recommended for radiator reverse flushing. The nozzle is made by Molded Specialties, Inc., Cleveland, Ohio, for use with existing air and water hoses.

More details? Circle 437 on reply card

Crankshaft journals can be quickly trued in the engine without removing heads or piston assemblies with Tru-It, says maker



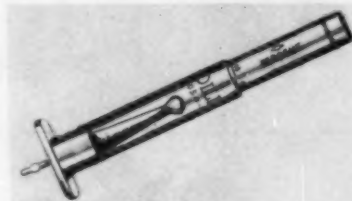
St. Charles Machine Industries, Inc. Tru-It is the company's new crankshaft journal reconditioning tool.

More details? Circle 438 on reply card

Riveting thin sheets of metal is easier with "Squeeze Riveting," says Southco Division, Lester, Pa. Thin, unsupported sheets are fastened securely with "Squeeze" rivets and a pocket-size plier-type tool.

More details? Circle 439 on reply card

Tire tread gage just announced by Dill Mfg. Co., Cleveland, Ohio, features simplified design. Gage percentage reads from



0 per cent for a new tire to 100 per cent worn for a bald tire, in graduations by 10's. Indicators are based on normal 11/32 tread.

More details? Circle 440 on reply card



½ cent a mile saved in maintenance will boost net profit about 50%. So says the recent A.T.A. Research Survey.*

Launch such a maintenance cost reduction program by governing engine speed. It is generally recognized that preventing excessive engine speed will materially reduce engine and brake repairs. You also save on gasoline, oil and tires, besides reducing your accident hazard. Ask your insurance company about that.

Install Handy Vari-Speed Governors and get your program on the road.

* Commercial Car Journal, March, 1960—"A. T. A. Asks Fleets..."

KS

KING-SEELEY CORPORATION
ANN ARBOR, MICHIGAN

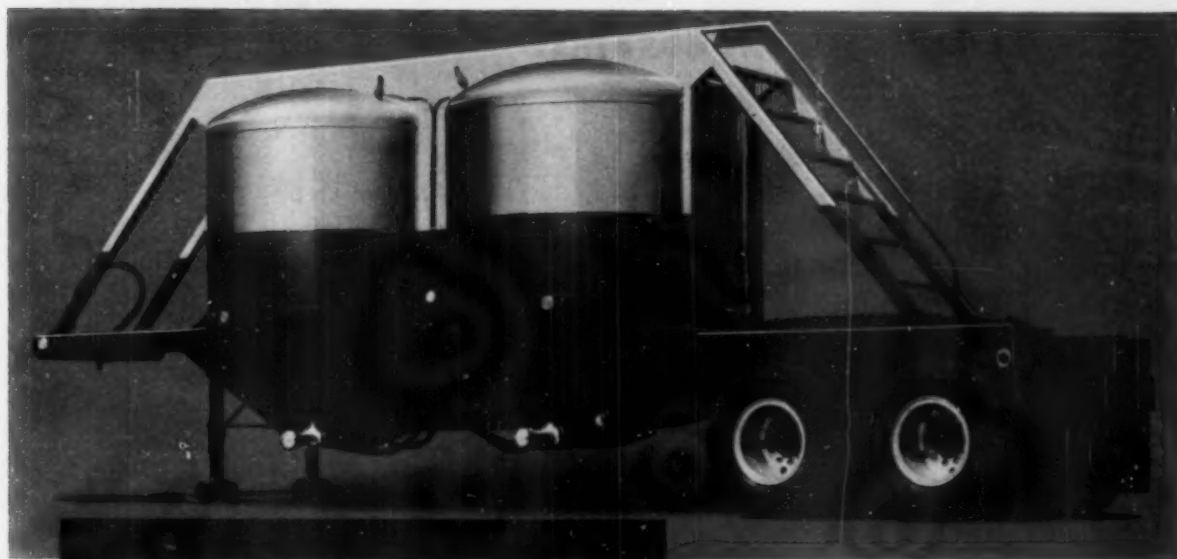
WORLD'S LARGEST MANUFACTURERS OF AUTOMOTIVE GOVERNORS

not just new for '61...

but **BRAND
NEW!**

Now after 16 months of *on-the-road testing* Nordic Trailer Company offers a *complete* line of pneumatic bulk trailers for 1961.

Nordic Trailers are *many* pounds lighter than any other type pneumatic bulk trailer on the market today. Low weight + perfect load distribution = maximum payload. Because the superstructure carries the entire load, the Nordic Trailer makes it possible to put more "pay" into payload.



NORDIC'S
pneumatic
bulk
trailer

Nordic also has an unique air system that facilitates natural gravity flow of material down to the bottom of the tank, where air pressure takes over the transport of material. There is never a plugged line . . . 100% *cleanout*.

Write today for complete information on how Nordic can best meet your needs.



NORDIC TRAILER COMPANY • 5944 CASMERE • DETROIT 12, MICHIGAN



shop equipment

Continued from Page 138

Brake spider servicing kit permits spiders to be reworked without removing them from the axle, according to the maker, Superior Machine Co., Kenton, Ohio. Kit has all equipment needed to bore and bush anchor pin holes on all drive and trailer axles with 16½ or 18 in. diameter brakes.

More details? Circle 441 on reply card

Hose clamp plier designed for use with new spring-type clamps has been announced by Vlchek Tool Co., Cleveland, Ohio. Known as Model No. PHC208, it features front and side adjustments for use in hard-to-get-at places.

More details? Circle 442 on reply card

Gas pressure regulators without conventional glass-covered gages are now available from Air

Reduction Sales Co., New York City. The new line of two-stage regulators are for both oxygen and acetylene cylinders. Delivery pressure is set with a micrometer type indicator for low or high range. Gage also has a cylinder pressure indicator.

More details? Circle 443 on reply card

Tune-up tester handles 4, 6 or 8-cyl engines with 6 or 12-volt systems. Fox Valley Instrument Co., Cheboygan, Mich., guaran-

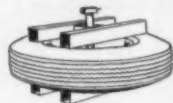
PROTECT YOUR MEN FROM THE HAZARDS INVOLVED IN INFLATING TRUCK TIRES



Branick SAFETY INFLATION CAGE

Improperly mounted or defective side or lock rings blown off, while inflating truck tires, can cause serious or fatal accidents. THE BRANICK SAFETY INFLATION CAGE SAFEGUARDS SERVICEMEN FROM SUCH INJURY OR DEATH WHILE INFLATING TRUCK TIRES. CAGE OF 2" STEEL PIPE IS PRESSURE TESTED TO GIVE COMPLETE PROTECTION. List price \$110.00 f.o.b. factory.

**BRANICK
SAFETY INFLATION DEVICE**
This two piece unit is small, compact and easy to use. . . Useful on service trucks as well as in shops. Pressure tested. List price \$45.00 f.o.b. factory.



BRANICK PRODUCTS CO., Inc.

FARGO

BOX 1937

NO. DAKOTA

Canadian Dealers: Write for the name of your nearest jobber. All exports write: Branick Mfg. Export Co., 82 Beaver St., New York, New York. Eastern Sales Office & Display Room: 501 East Exchange St., Akron, Ohio.



tees the new Model No. 850 to be accurate within two percent of full scale reading.

More details? Circle 445 on reply card

Tank truck cleaning is said to be simplified with the new Vibra-Jet ball sprayer attachment from DuBois Chemicals, Inc., Cincinnati, Ohio. Said to completely elimi-

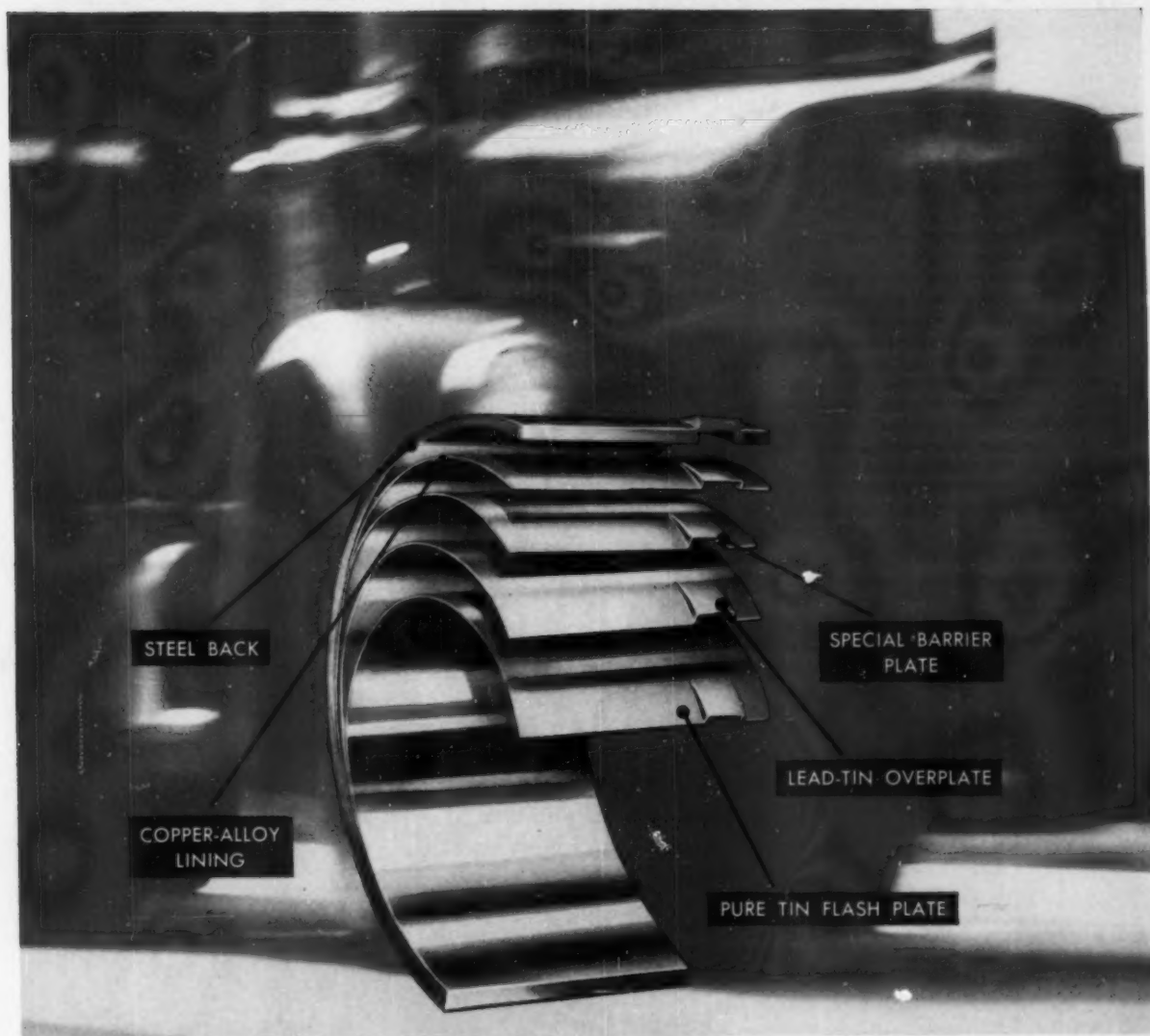


nate blind spots in cleaning tank interiors, units are made to suit individual cleaning operations. High or low volume with top or side discharge is available.

More details? Circle 446 on reply card

TURN PAGE, THERE'S MORE

Better products, *faster*, from your Federal-Mogul jobber:

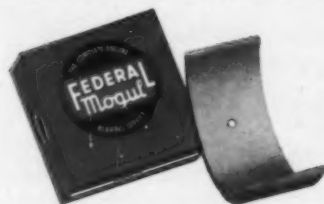


You can't tell the difference (*until performance peaks!*)

Smart fleet owners agree . . . regular overhauls pay off. But even with regular replacement, engine bearings may wear excessively. Result: high oil consumption and loss of power. That's why it pays to specify Federal-Mogul bearings when you overhaul. The quality "difference" in Fm engine bearings—like the CP bearing shown—gives you better performance and more power throughout the rebuilt life.

As one of the largest suppliers of bearings to engine manufacturers, Federal-Mogul knows how to build bearings that stand up in rugged service. Fm bearings are made in thousands of types and sizes . . . one that's right for your replacement.

Need top quality engine bearings? Call your Federal-Mogul jobber for best availability and service.



FEDERAL-MOGUL ENGINE BEARINGS

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. • DETROIT 13, MICHIGAN





shop equipment

Continued from Page 140

Magnetic stick called "Grip-Stick" picks up small tools and parts. Made by General Electric, it's a telescoping steel rod with a powerful cylindrical magnet on the end of a flexible spring. A "Grip-Stick" will be given free to any shop buying one case of No. 4002 GE headlamps and a case of any

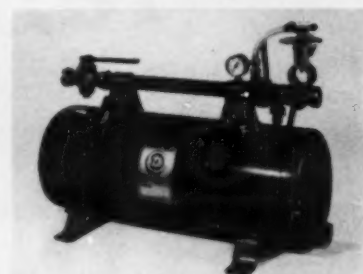
other type of headlamps during March and April, 1961.

More details? Circle 447 on reply card

Hose clamp plier from Proto Tool Co., Los Angeles, Cal., is a new adjustable model. The slip-joint Corbin hose clamp plier Model No. 252 has two gripping positions which, combined with the adjustable feature, permit it to accommodate all Corbin spring clamps.

More details? Circle 448 on reply card

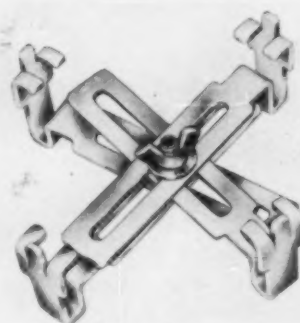
Pneumatic tool cleaning and oiling device just introduced by C. J. Breitenstein Co., Buffalo, N. Y., is the Von-Arx Cleaner-Oiler. The unit has two tanks, one of which blows solvent through the tool to



clean. The other then sends lube oil through for thorough lubrication. Light enough to carry from one job to another, the new device permits bearings, oilers, etc., to be field-cleaned.

More details? Circle 449 on reply card

Carburetor repair stand (Model No. BT-30-15) is a new item from Borroughs Tool & Equipment Corp., Kalamazoo, Mich. It's said to hold the carburetor firmly in



position on workbench, leaving both hands free to work. It handles any carburetor, either two or four-barrel type.

More details? Circle 450 on reply card

CCS

Tipsey Truck Mechanic: "What you doin'?"

Workman: "Digging a tunnel."

Tipsey Truck Mechanic: "Where's it goin'?"

Workman: "Under the river."

Tipsey Truck Mechanic: "How long will it take?"

Workman: "About three or four years."

Tipsey Truck Mechanic: "Thash jush too bad. I can't wait all that time. I'll jush have to take a taxshi."

The key to PISTON PERFORMANCE

WIRESIST INSERT
INTEGRATES TOP RING GROOVE
WITH MOLECULAR BOND
AND MECHANICAL LOCK



DUALOY
THE BI-METALLIC MOLECULAR BONDED PISTON

Dualoy heavy duty pistons meet every operational demand of higher compression ratios, higher temperatures, higher horsepower... and longer life... with the lowest cost per ton mile

of payload and freedom of down time due to piston failures.

19 DISTRIBUTOR WAREHOUSES

strategically located throughout North America with complete factory maintained inventories assure immediate availability of cataloged items to meet every emergency order.

MANUFACTURED BY

UNITED ENGINE & MACHINE CO.

INCORPORATED

310 PREDA ST.

SAN LEANDRO, CALIF.

DISTRIBUTORS

Factory Warehouses

Atlanta, Georgia; Cambridge, Mass.; Charlotte, N. C.; Chicago, Ill.; Dallas, Texas; Denver, Colo.; Houston, Texas; Indianapolis, Ind.; Long Island City, N. Y.; Los Angeles, Calif.; New Orleans, La.; Phoenix, Ariz.; Portland, Ore.; St. Louis, Mo.; Salt Lake City, Utah; San Antonio, Texas; and Seattle, Wash.

THROUGHOUT

NORTH AMERICA

SILV-O-LITE

Better Pistons Since 1922

ONE WAY

All the EIS talents and engineering skills are constantly channeled in one direction — to make "The Brake Parts Line" *better*. This is the finest habit EIS ever developed and the result has been a specialized experience that shows up in every brake part EIS produces.

You'll see exactly what is meant the next time you order any of the parts that make up "The Brake Parts Line." You, too, will find that EIS Brake Parts are *BETTER* for replacement — *BETTER* in quality — *BETTER* in performance — *BETTER* in price and, of course, *BETTER* for your profit picture.

You can only draw one conclusion from this — EIS people have always had a one-track-mind!

BOOTHS 2554-5, 2619-20
at the IASI Show in Los Angeles



**PACKAGED, MERCHANDISED,
CATALOGUED and PROMOTED**
the way you like it!



**COMING
YOUR WAY
IN FEBRUARY!**

The **NEW**, combined **HYDRAULIC, POWER BRAKE AND CABLE CATALOG** will be mailed to every Repair Shop, Service Station, Garage and Car Dealer in the country! **WATCH FOR IT!**



Ask your EIS Distributor or write for Catalogs!

EIS AUTOMOTIVE CORP., Middletown, Conn.

High flotation tires keep vehicles rolling

THE NEW Terra-Tire, from the Goodyear Rubber Co., has made possible the design of special vehicles never used before. The tires range in height from 16 in. to over 5 ft and are sometimes as wide as they are high. They can roll over rocks and through mud, sand, snow and swamps. Because of low inflation pressure, they can actually float vehicles.



One of the first uses for the odd-shaped Terra-Tires was on ground support equipment (see photo), manufactured by the FWD Corp., Clintonville, Wis., for the Air Force's Matador missile. The tires were used because they give a soft ride over almost all types of terrain. They are 42 in. high, 40 in. wide and 10 in. across the hub.

Also pictured is peat harvesting equipment used by Millburn Peat Co., Otterbein, Ind. Company officials report that the use of a scraper and tractor equipped with the soft-riding tires results in greater production with lower operating costs.

The "tree-knocker," also shown, is made by A. D. Goodwin & Son, Inc., Manteca, Cal. The vehicle is used to butt nut trees, knocking the nuts to the ground. The soft, smooth-skinned Terra-Tires allow the tree-knocker to roll over the nuts without crushing them.

Other uses for the Terra-Tire include . . .

- Moving heavy drilling equipment over rocky, roadless terrain, or over soft marsh lands and through shallow rivers.

- Grading soft earth without leaving ruts.

Terra-Tires are made of nylon in a wide range of sizes and tread patterns.



FRANCHISED DISTRIBUTORS COAST TO COAST

(Distributors handling only truck body or low-bed lines are so indicated.)

ALABAMA Birmingham . . . North Alabama Tractor & Trailer Co. Dethan . . . Felts Trailer & Equip. Co. Mobile . . . Gulf Coast Truck & Equip. Co. Montgomery . . . Bach Trailer & Body Sales	MISSOURI Cape Girardeau . . . Harris Truck & Trailer Sales, Inc. Chillicothe . . . Cooke Sales & Service (Low-beds) Kansas City . . . Westfall GMC Truck, Inc. Springfield . . . Montgomery GMC Trucks, Inc.
ARIZONA Phoenix . . . Trucks, Inc.	MONTANA Billings . . . Motor Power Equip. Co. Great Falls . . . General Truck & Tractor Co.
ARKANSAS Fort Smith . . . Shipley Motor Equip. Co. Little Rock . . . Little Rock Machinery Co. (Low Beds) Southern Equipment Co. (Bodies)	NEBRASKA Omaha . . . Leonard W. Begley & Sons, Inc.
CALIFORNIA Los Angeles . . . Eight Point Trailer Corp. San Leandro . . . M & H Truck & Trailer Service Turlock . . . Lakeside Truck Body Co. (Bodies)	NEVADA Reno . . . Jordan Thermoking Co.
DISTRICT OF COLUMBIA Washington . . . S. J. Meeks' Son	NEW HAMPSHIRE Concord . . . New Hampshire Tractor Corp. (Low-Beds)
FLORIDA Jacksonville . . . Florida Trailer Sales, Inc. Lakeland . . . Central Supply Co. Miami . . . Florida Equip. Co. (Low-beds) Miami Dade . . . Trailer Sales & Service, Inc. Orlando . . . Florida Equip. Co. (Low-beds) Orlando . . . Orlando White Trucks Inc. Tampa . . . Florida Equip. Co. (Low-beds) Tampa . . . Rivers Body Tampa, Inc. Tampa . . . Florida Equip. Co. (Low-beds)	NEW JERSEY Irvington . . . Peter Wendel and Son
GEORGIA Atlanta . . . Posey & Linn, Inc. Augusta . . . Bill Jones Motors Macon . . . Johnson Trailer & Equip. Co. Savannah . . . Young Truck Sales & Service, Inc.	NEW YORK Batavia . . . Boyles Motor Sales Brooklyn . . . B. & J. Spring & Equip. Co. Manhattan . . . B. & J. Spring & Equip. Co. Minneapolis . . . B. & J. Spring & Equip. Co. Nassau . . . Cronin Truck Body & Equip., Inc.
IDAHO Boise . . . Boise Kenworth Co. Twin Falls . . . McVey's, Inc.	NORTH CAROLINA Charlotte . . . Southern Equip. Service Co. Charlotte . . . Carolina Body & Equip., Inc. (Bodies) Wilson . . . Simpson Equip. Corp.
ILLINOIS Chicago . . . Dorsey Trailer Sales & Service of Chicago Chillicothe . . . Koch Motor Sales Decatur . . . Glatz Truck-Trailer Sales, Inc. Springfield . . . Arrow Trailer & Equip.	NORTH DAKOTA Fargo . . . Smith, Incorporated
INDIANA Evansville . . . Hocker Power Brake Co. Fort Wayne . . . Bowlin-Gaff Car Rental, Inc. Indianapolis . . . H & H Trailer Sales South Bend . . . Schwalm Trailer Co.	OHIO Cincinnati . . . Dorsey Trailer Sales of Cincinnati Cleveland . . . Cleveland Truck Body & Equip. Co. (Bodies) Columbus . . . Weaver Trailer & Body Co. Dayton . . . Dayton Commercial Equip., Inc. Dayton . . . Weaver Truck Trailer & Body Corp. Elyria . . . Papenbrock Sales & Service Toledo . . . Middlekauff, Inc.
IOWA Cedar Rapids . . . Transport Truck & Equip. Inc. Des Moines . . . Wood Diamond T Sales, Inc. Hampton . . . Murphy Truck & Trailer Sales Sioux City . . . Sioux City Trailer Sales, Inc.	OREGON Portland . . . Beall Dorsey Trailer Sales of the Northwest
KENTUCKY Lexington . . . Wilson Machinery Co. (Low-beds) Louisville . . . Manning & Shipley, Inc. Louisville . . . Wilson Machinery Co. (Low-beds)	PENNSYLVANIA Allentown . . . Parker, Inc. Fairmount City . . . Stew's Truck & Trailer Sales Forty Fort, Wilkes Barre . . . Valley White Truck Company Harrisburg . . . Osterlund, Ind. New Castle . . . Bailey Sales & Service, Inc. Philadelphia . . . Edwin Coane Trailer Sales York . . . Roosevelt Garage, Inc. York . . . Truck Body & Equip. Sales (Bodies)
LOUISIANA Baton Rouge . . . Massart Supply Lake Charles . . . Massart Supply Lafayette . . . Massart Supply Shreveport . . . Daniels Truck-Trailers, Inc.	RHODE ISLAND Providence . . . Tractors, Inc. (Low Bed)
MARYLAND Ellicott City . . . Fed-er-Line Truck Bodies, Inc. (Bodies)	SOUTH CAROLINA Charleston . . . Southern Truck Co., Inc.
MASSACHUSETTS Somerville . . . Walsh Body & Trailer Corp.	SOUTH DAKOTA Sioux Falls . . . Schweigers, Inc. Watertown . . . Schweigers Sales, Inc.
MICHIGAN Detroit . . . Earle Equipment Co. (Low-beds) Hudsonville . . . Hudsonville Truck & Trailer Service	TENNESSEE Nashville . . . Matlock & Cope Memphis . . . Matlock & Cope
MINNESOTA Duluth . . . Economy Motors, Inc. Minneapolis . . . Blawett-Hanson Trailer Sales	TEXAS Austin . . . Commercial Body Corp. Grand Prairie . . . American Body & Equipment Co. (Bodies) Houston . . . Houston Trailer and Truck Body, Inc. San Antonio . . . Commercial Body Corp.
MISSISSIPPI Jackson . . . Capitol Trailer & Body Co.	VIRGINIA Harrisonburg . . . Highway Motors, Inc.
	WASHINGTON Spokane . . . Spokane Dorsey Trailer Sales
	WEST VIRGINIA Charleston . . . Motor Truck Sales, Inc. Huntington . . . Carroll Equipment, Inc. Wheeling . . . West Virginia-Ohio Motor Sales, Inc.
	WISCONSIN Madison . . . Dorsey Trailer Sales of Madison Milwaukee . . . Brake and Equip. Co., Inc.
	WYOMING Casper . . . Mears Equipment Co.

● More details? Circle 183 on reply card inside back cover

**In every field, coast to coast...
men who know their trailers
 are proud to say... "it's a Dorsey!"**



Dorsey Trailers and Bodies are sold and serviced by franchised distributor specialists Coast to Coast. See the Yellow Pages.



A Subsidiary of The Dorsey Corporation

DORSEY TRAILERS • ELBA, ALABAMA
 Send for **FREE LITERATURE**

Send literature with details on—

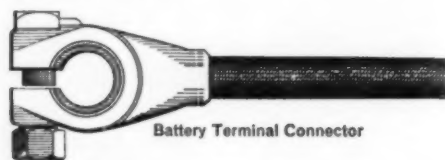
—Extra light freight vans	—Furniture vans	—Insulated vans
—Economy freight vans	—Grain Trailers	—Livestock vans
—Hi-Cube freight vans	—Platforms	

NAME _____

ADDRESS _____

CITY _____

ORDER YOUR PACKARD ELECTRIC CABLE NEEDS NOW



Battery Terminal Connector

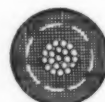


High- and Low-Tension Cable



Snap Fast Connectors

Packard Electric has a complete line of quality automotive cables. They are used on more cars than all other makes combined. From Connectors to High- and Low-Tension Cable, through Battery Cable and T.V.R.S. (Television-Radio Suppressor) Cable, Packard Electric Products have a well-earned reputation for reliability and are packaged for profit and convenience.



Engine Compartment Cable



T.V.R.S. Cable



AND ENJOY ELECTRIC BLANKET BONUS!

SPECIAL DEAL—

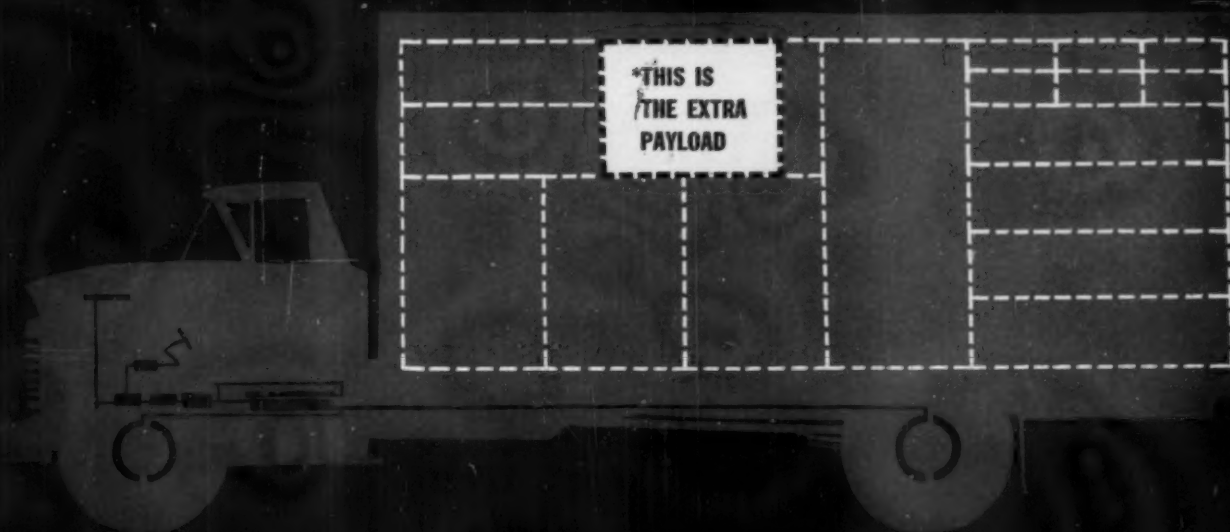
A CASCO ELECTRIC BLANKET FOR ONLY \$11.95

A \$20 order for any combination of Packard products qualifies you. All you have to do is figure your cable needs for the season. Ask your U-M-S supplier to explain just how easy it is to get one of these Casco Electric Blankets, twin or double size.



BENDIX[®] HYDROVAC[®] POWER BRAKES

pyramid profits with
extra payload*



PAYLOAD—Hydrovac Power Brakes weigh less, permit increased payloads up to several hundred pounds.

PRICE—Hydrovac Power Brakes cost *less to buy, less to operate, less to maintain.*

PROTECTION—*Built-in standby safety . . . manual braking available in case of power failure.*

More Bendix Hydrovac vacuum power brakes are in use than all other makes.

Bendix PRODUCTS
DIVISION South Bend, IND.



Will **Mo-Mile** Make Possible the 100,000 Mile Retread?



It's certainly possible. Mileage, of course, depends on many factors—loads, road conditions, traffic, even maintenance. For example, one of our Mo-Mile tests was on a fleet traveling mostly over turnpikes. The tires on the drive wheels traveled over 105,000 miles. On another fleet, traveling through the eastern mountains, our Mo-Mile retreads on the drive wheels topped 55,000 miles. On the former, the best previous mileage obtained from the best grade tread rubber was 75,000 miles. *Mo-Mile increased tread wear by 40%. On the latter run, previous maximum mileage was 40,000. Here Mo-Mile increased tread wear by 37%!*

How about Mo-Mile on the free-rolling wheels? Frankly, we don't know. Our preliminary tests to date are so good we're afraid to believe them!

We do know this! Our new Mo-Mile Process will give you mileage beyond anything you've ever experienced! It'll reduce your cost per mile drastically. You'll change tires less often, keep equipment on the road longer.

Your regular recapper can retread your tires with Mo-Mile using his regular equipment. You'll pay more per tire, but in total you'll pay much less. Prove it yourself. Specify Mo-Mile on the next tire you get recapped. Or mail us your retreader's name and address. We'll send him complete details immediately.



MOHAWK

THE MOHAWK RUBBER COMPANY
Akron 5, Ohio

Plants in Akron, Ohio

• Helena, Arkansas

• Stockton, California

148

• More details? Circle 186 on reply card inside back cover

"Jack Rabbit"

Continued from Page 108

record, keeps a man on his toes!

Attention of all Sentinel-Star company personnel is focused on the "Jack Rabbit" safety record through a little employee paper. We report all accidents in it. We also make a big splash about all good reports on route operation.

We've found the police throughout our area to be very cooperative. They report anything unusual noted about our trucks, whether it's bad or good. You'd be surprised how pleased they are to report the good!

The chief in one town wrote us a special letter to compliment our man for parking close to the curb to avoid blocking traffic . . . even though his stop there was brief. That was the first we knew about it.

Hurricane service

"Jack Rabbit" has built up a nice relationship with folks throughout our area with our hurricane service. Several times, we've provided the only source of news, medical supplies and food in the first hours of disaster.

After a hurricane has passed, all trucks are equipped with required supplies and we all head-out, two men to a truck. Our vehicles and men work day and night until the emergency is over.

We find the reputation we're building is a big help to our drivers. Since the work is only part-time, driving a "Jack Rabbit" truck is usually a temporary job. Our reputation for having good, capable and safe drivers provides the men with excellent references for landing good full time jobs when they leave us.

END

Please Resume Reading Page 109

Diner Waitress: "Oh, come off it, big boy. Don't you think all this kussin' is too childish?"

Reefer Driver: "Yeah, baby!"

COMMERCIAL CAR JOURNAL, January, 1961

There
is
Only



me

Aero-Seal JET

WORM DRIVE HOSE CLAMP



POPULAR
JUNIOR
ASSORTMENT
MASTER
ASSORTMENT
ALSO AVAILABLE

An original product design will always be copied, but the genuine article keeps the confidence of the user by dependability. AERO-SEALS laugh at vibration and corrosion... hang on tightly... never shake loose or snap open. And they won't damage hose. Bands and housings are of 302-18-8 stainless steel. No extra cost for quick-attach Jets. Regular AERO-SEALS are also available.

Complete range of sizes from 7/16" up.

**BREEZE
MARK**

BREEZE CORPORATIONS, INC.

700 Liberty Avenue, Union, New Jersey Cable Address: Breeze, Union, N. J.

NO LOST CAPACITY...



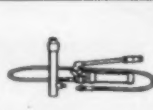
HEIN-WERNER

Hydraulic Jacks are double sealed
to maintain full rated capacity...
better built to withstand
severe shop use!

With Hein-Werner, you get the *best* hydraulic jack money can buy! And dollar-for-dollar, you get more quality, safety, and trouble-free performance with powerful, easy lifting action. Leather ram cup with thicker heel and grooved, double-lipped Quad-Ring provide doubling sealing action on the ram to maintain full capacity rating.

Check for yourself *all* of the jack advantages gained from Hein-Werner. Nine models *available now* from your Hein-Werner Jobber to meet every truck lifting need, in capacities from 1½ to 100 tons. Make your shop safer and more efficient with Hein-Werner Hydraulic Jacks—they're built right to retain full-rated capacity!

Hein-Werner
CORPORATION
WAUKESHA, WISCONSIN



'55' PACER UNDER AXLE JACKS STANDS FLOOR JACKS SWIFT LIFTS "PUSH & PULL" BIPOD JACKS TRANSMISSION JACKS

FITZGERALD GASKETS

have the
answer

TRACTOR USERS have proven
Fitzgerald best in reliability. Order
today for tomorrow's repairs.



WITH
THE
ADDED
EXTRA
→ *Craftsmanship*

The Fitzgerald Manufacturing Co.

Torrington, Connecticut
Branches and Warehouses
Los Angeles, Calif.—Chicago, Ill.
Canadian FITZGERALD Ltd., Toronto, Canada

● More details? Circle 189 on reply card inside back cover



KAY-LAB DISABILITY FLASHER KIT

Protects standing vehicles

NOW you can also use your turning signals to flash emergency warning lights simply by installing low-cost Kay-Lab Disability Flasher Kit. Lights flash front and rear simultaneously; kit meets latest ICC requirements. Kits come complete, can be installed in minutes. Control switch clamps on—no holes to drill. Two types—

Heavy-Duty for trucks, trailers, earthmoving rigs; includes famous vibration-proof Universal Flasher, flashes up to sixteen 32-cp bulbs simultaneously, 75 times per minute. 6 and 12-volt models.

Regular-Duty for passenger cars and taxis; flashes up to six 21-cp lights, 90-100 times per minute... includes Kay-Lab Stop-It Flasher widely used on fire and police vehicles. 6, 12 and 24-volt models.

Unconditionally guaranteed. Order from your truck dealer or jobber, or write us for folders and prices.



KAY-LAB FLASHERS

MANUFACTURED BY MACCHI & COMPANY
819 VALENCIA ST., SAN FRANCISCO 10, CALIF.

● More details? Circle 191 on reply card inside back cover

COMMERCIAL CAR JOURNAL, January, 1961

THE ORIGINAL SPRAY STARTING FLUID*



• Starts diesel and gasoline engines (from the smallest to the largest) down to 65° F. below zero • Starts in seconds • Excellent in humid weather too • Millions of cans sold • See your automotive jobber

*The inventors of spray starting fluid. Patent No. 2,948,595

Ask for the can with the "balky donkey" trademark

SPRAY PRODUCTS
CORPORATION

P.O. Box 1988 • Camden 1, N.J.

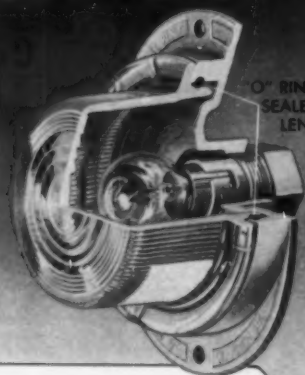


● More details? Circle 190 on reply card inside back cover



9 YEARS

of continuous
burning
and still
going strong



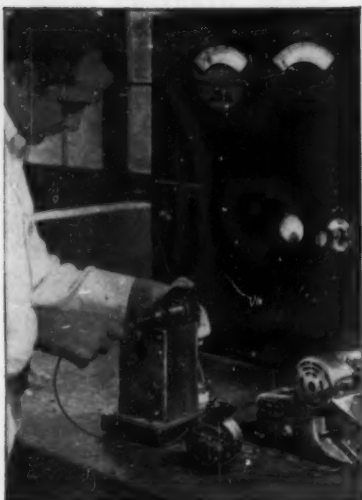
Warren Snap Seal Safety Lamps are operating dependably even after nine years of rugged over-the-road service. Eliminate replacement costs and minimize maintenance. Uncompromising quality is the answer... specify vapor-proof Warren Snap Seals.

Complete line available.

BETTS

MACHINE COMPANY
WARREN, PENNSYLVANIA

● More details? Circle 192 on reply card inside back cover



... and for **NEARBY SERVICE** on **Black & Decker**

tools. Black & Decker maintains 50 factory service branches plus authorized service stations to give your B&D tools the attention mechanical products need periodically. Keep your B&D tools in top condition, on the job all the time.

Only factory parts and factory-approved methods are used. Fast service and reasonable cost, always.



SWIFTY SERVICE says
be sure to ask about:

FREE TOOL INSPECTION
no cost,
no obligation.

**STANDARD B&D
GUARANTEE** after
completion of all
recommended
repair work.

You'll find the location of the nearest B&D repair facility in the Yellow Pages under "Tools-Electric," or write for address to: **THE BLACK & DECKER MFG. CO., Dept. 5401-S, Towson 4, Md.**



Black & Decker

Quality Tool Service

Special truck for a special job

Continued from Page 101

"Credit where credit is due"

Our most important thanks to International Harvester and to Metropolitan Body Co., its subsidiary, for their assist in both material and technical help on both the basic truck and body.

Others whom we extend many thanks include . . .

Interior Milling Co.—complete custom interior.

D. W. Onan & Sons, Inc.—5 KW generator.

Bostrom Corp.—"Viking" driver seat.

Air Lift Co.—air bag auxiliary suspension.

Sway Control, Inc.—automatic air leveling unit.

Radio Corp. of America—tape recorder.

Delco-Remy Division, GM—special horn, alternator, and regulator.

Aluminum Co. of America—gold-anodized aluminum.

Signal-Stat Corp.—complete lighting equipment.

Bell Telephone Co. of Pa.—2-way telephone.

Hunter Mfg. Co.—15,000-Btu, gas-fired heater.

Bendix - Westinghouse Automotive Air Brake Co.—air brake system and horns.

Wagner Electric Corp.—new-type 15-day tachograph.

Service Recorder Co.—rpm tachograph and speed warning indicator.

F. Schumacher & Co.—upholstery materials.

Young Windows, Inc.—special size, deep-tint windows.

E. I. du Pont de Nemours & Co.—all paint plus interior trim.

Arrow Safety Device Co.—mirrors and dome lights.

Welbilt Corp.—110-volt air conditioners.

Minnesota Automotive, Inc.—hydraulic brake lock.

Hollingshead Corp.—Perry cooling system filter.

K-D Lamp Co.—directional signal switch and safety equipment.

Kilgore, Inc.—safety equipment.

Proto Tool Co.—complete set of hand tools.

Black & Decker, Inc.—electric Hole Gun drill.

Royal Typewriter Co.—Futura portable typewriter.

... and the list still grows.

END

Please Resume Reading Page 102

Motorama on the Move

General Motors' big industrial show, "Motorama," is being transported from city to city over the high-

ways. Highway Trailer Co., New York City, built 75 of the 91 specially constructed trailers that are being used to haul the show around the country.





B&D Sander-Grinders 60% faster, get your equipment rolling faster!

Try a B&D 7" H. D. Sander-Grinder in your own shop—watch it hog metal as much as 60% faster than anything you've ever seen. You'll find B&D Sander-Grinders run cooler, allowing longer continuous operation. Perfect overall balance and light weight assure less operator fatigue. Hot exhaust air is blown away from user.

To speed body sanding, grinding, cutting, brushing; to smooth welds, remove rivets, cut off studs fast, call your B&D jobber or mail coupon for a demonstration of a B&D 7" Sander-Grinder.

REMOVE MATERIAL 60% FASTER under maximum load conditions. Cut down time with a hard-working B&D Sander-Grinder.

BODY SANDING GOES FASTER with the operator in control at all times. B&D Sander-Grinders ready work for paint—fast!

Black & Decker Tools are sold by leading distributors everywhere. For sales or service look in the Yellow Pages of your telephone book under



Black & Decker®

CUTS MAN-HOURS TO MINUTES

THE BLACK & DECKER MFG. CO., Dept. 5401
TOWSON 4, Md. (In Canada: Brockville, Ont.)

- ☐ Please arrange a demonstration of Sander-Grinder
☐ Please send additional information on.....

Name..... Title.....

Company.....

Address.....

City..... Zone..... State.....



☐ Drills



☐ Vacuum Cleaners



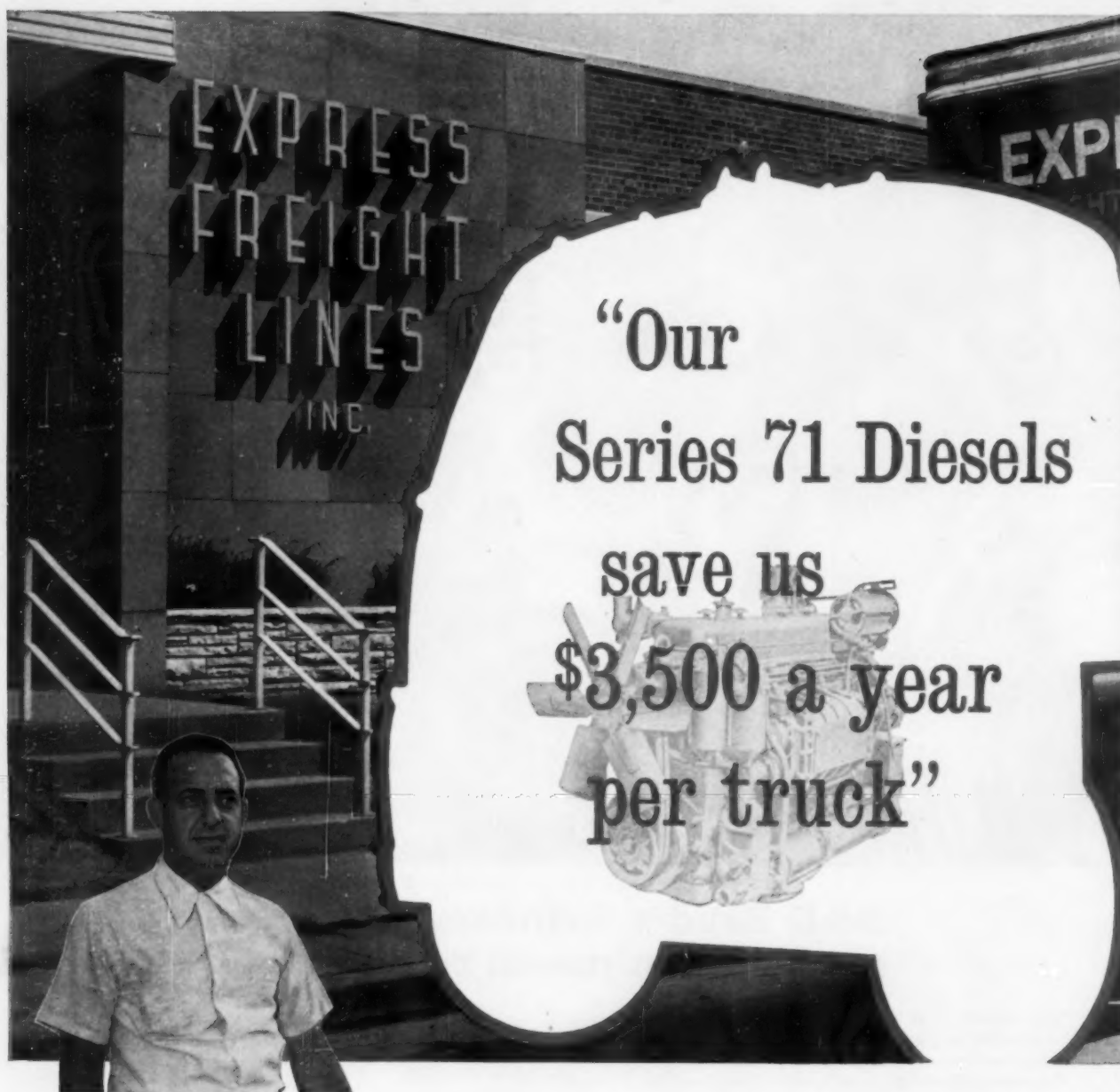
☐ Polishers



☐ Valve Refacers

• More details? Circle 193 on reply card inside back cover





**"Our
Series 71 Diesels
save us
\$3,500 a year
per truck"**

reports Harold Rabidoux, Maintenance Superintendent,

Why has Milwaukee's Express Freight Lines bought 32 new trucks powered with Series 71 Diesels since March 1959?

Listen to Maintenance Superintendent Harold Rabidoux: "We're saving \$3,500 per year with every 6-71 Diesel we own."

He breaks that figure down this way—fuel savings of \$2,700 per truck each year over the gasoline-powered trucks they replaced, \$800 annual maintenance savings per engine.

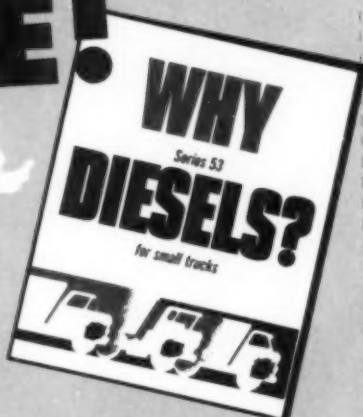
At that rate, this Milwaukee-Detroit hauler of general

freight will soon save enough to pay off his new equipment investment and be on his way to a record profit.

If you are looking for ways to beat the "profit squeeze," take a look at the savings you'll make with Series 53 or 71 truck Diesels. You'll find a "V" or "in-line" engine rated from 97 to 434 horsepower capable of running any truck from 16,000 GVW to the biggest turnpike cruisers.

But get the whole story before you repower your present trucks or buy new ones. Ask your truck dealer about getting Series 53 or 71 power in new trucks—or

FREE!



*20-Page book on the savings
you'll make by "GOING DIESEL"*

Tells you

- How You Save
- Why You Save
- Where You Save

Tells you how to figure

- Fuel & Maintenance Savings
 - Yearly Return on Investment
- Plus Many Other Valuable Tips

First Class
Permit 10,688

PAID

Section 34.9
PL 4 R,
Detroit, Mich.



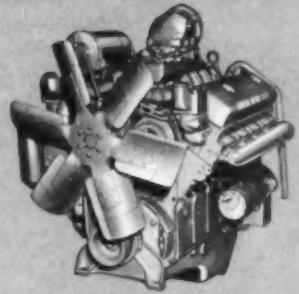
BUSINESS REPLY CARD

54 POSTAGE WILL BE PAID BY

DETROIT DIESEL
13400 West Outer Drive
Detroit 28, Michigan

Dept. CCJ-4

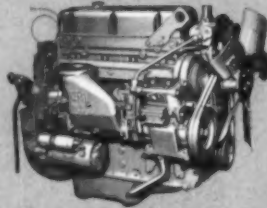
**MAIL
THIS
CARD
TODAY!**



V-71 Truck Models

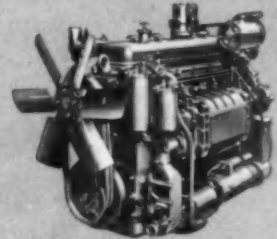
6V-71...218 H.P.
8V-71...280 H.P.
12V-71...434 H.P.

Series 53 and 71 Truck Models



Series 53
Truck Models

3-53... 97 H.P.
4-53... 130 H.P.
6V-53... 185 H.P.



Series 71
In-Line
Truck Models

4-71E...145 H.P.
6-71E...218 H.P.



Please send me my copy of "Why Series 53 Diesels for Small Trucks?"

NAME..... (Please print)

COMPANY.....

ADDRESS.....

CITY..... COUNTY..... STATE.....



New Gulflube[®] Motor Oil H.D.—the one oil for **GULF MAKES THINGS**

New Gulflube[®] Motor Oil H.D. provides complete engine protection for both hot temperature, long distance hauling and cold temperature stop-and-go operations. In short: it's a versatile oil for gasoline, diesel or LP gas engines.

This Supplement 1 level oil has good stability because it's formulated with distillate "heart of the crude" base oils. And new additives give it maximum detergency, dispersancy and resistance to oxida-

tion. These same additives prevent excessive wear.

Gulflube Motor Oil H.D. offers important benefits like these:

1. Cleaner engines in both combustion zone and lubrication zone.
2. Low oil consumption.
3. More mileage between ring jobs and overhauls.
4. Lubrication protection over the entire engine-temperature range—regardless of the combina-



both over-the-road and stop-and-go service . . .

RUN BETTER!

tion of start-stop and over-the-road driving by each vehicle.

5. One oil simplifies purchasing, storing and handling. (Available in SAE grades 10W, 20/20W, 30, 40, 50.)

Try new Gulfube Motor Oil H.D. in your fleet. See for yourself how Gulf makes things run better! For complete details, use the coupon. Or call your nearest Gulf office.

● More details? Circle 195 on reply card inside back cover



GULF OIL CORPORATION

Dept. DM, Gulf Building
Houston 2, Texas

Please send me booklet on new Gulfube Motor Oil H.D.

Name

Title

Company

Address

City Zone State

Longest dam haul . . .

Continued from Page 111

over the pit every second day. Oil samples are taken at every second oil change and are mailed to Faber Laboratories for analysis.

Behind the shop there's a Clayton dynamometer. Outside, behind the building, there is a 62-ft wash

rack equipped with a natural gas-fired Malsbury steam cleaning unit.

Miscellaneous shop facilities include a parts inventory worth between \$10,000 and \$20,000 . . . an Ingersoll-Rand motor-driven standby compressor . . . American Brake

Shoe electric compressor . . . 1000-lb capacity Hein-Werner transmission jacks.

There's an overhead crane, wall-mounted air and oil lines, portable work benches. The mobile electric welder has rubber-tired wheels and a trailer hitch. The acetylene welding equipment is also on wheels.

Tires are serviced under contract by a General Tire Co. technician.

END

Please Resume Reading Page 114

Your vehicles



Are they logging or lagging?

Logging in the forest or logging miles on the highway can't be done profitably with **lagging** horsepower caused by clogged or improperly designed Mufflers or other Exhaust System units . . . When horsepower lags, check the Exhaust System first; then replace these parts with long-life, heavy duty RIKER . . . An Exhaust System check makes a costly overhaul unnecessary for thousands of extra miles . . . See your RIKER Distributor or write us today.

RIKER

MUFFLERS
EXHAUST
SYSTEMS

RIKER Manufacturing, Inc.

4901 Stickney Ave., Toledo 12, Ohio

● More details? Circle 196 on reply card inside back cover

Service ALL Diesel Nozzles ✓ BETTER

WITH THIS

BACHARACH "Universal" NOZZLE and INJECTOR TEST SET



FASTER

For General Motors 51, 53, 71 & 110 Injectors

For Bosch, Caterpillar CAV, I.H., Simms and similar Nozzles

For CUMMINS INJECTORS

Today's most widely used nozzle testing equipment. Factory approved by leading engine and equipment builders.

Available as the "Universal Test Set" illustrated or in selective sets comprising the particular components required for testing Cummins Injectors, GM Injectors or Bosch, etc. Nozzles.

ASK YOUR JOBBER OR WRITE US

FREE
Service Manual



BACHARACH INDUSTRIAL INSTRUMENT COMPANY
206 N. Braddock Ave., Pittsburgh 8, Pa.

☐ Send me FREE copy of your Service Manual Bul. 686

☐ Send me Product Bul. 696 on Universal Nozzle Tester

☐ Advise Name of Local Jobber

NAME _____

COMPANY _____

STREET _____

CITY & STATE _____

● More details? Circle 197 on reply card inside back cover

WEIDENHOFF



New

HEAVY DUTY SERIES 1500
6-12-24-32 VOLT SYSTEMS

GENERATOR TEST BENCH

Tests automotive, truck, bus generators including the latest heavy duty, 220 ampere — 14 volt — oil cooled A.C. generators.

PROVEN IN TWO YEARS OF FIELD TESTS

- Finger-tip speed control
- Remote controlled magnetic switches
- Belt or direct drive
- Thermostat controlled load bank

OPTIONAL model 1501 magneto test accessory group.
model 1508 oil cooled A.C. generator test accessories.

WRITE FOR INFORMATION AND ILLUSTRATED BROCHURE

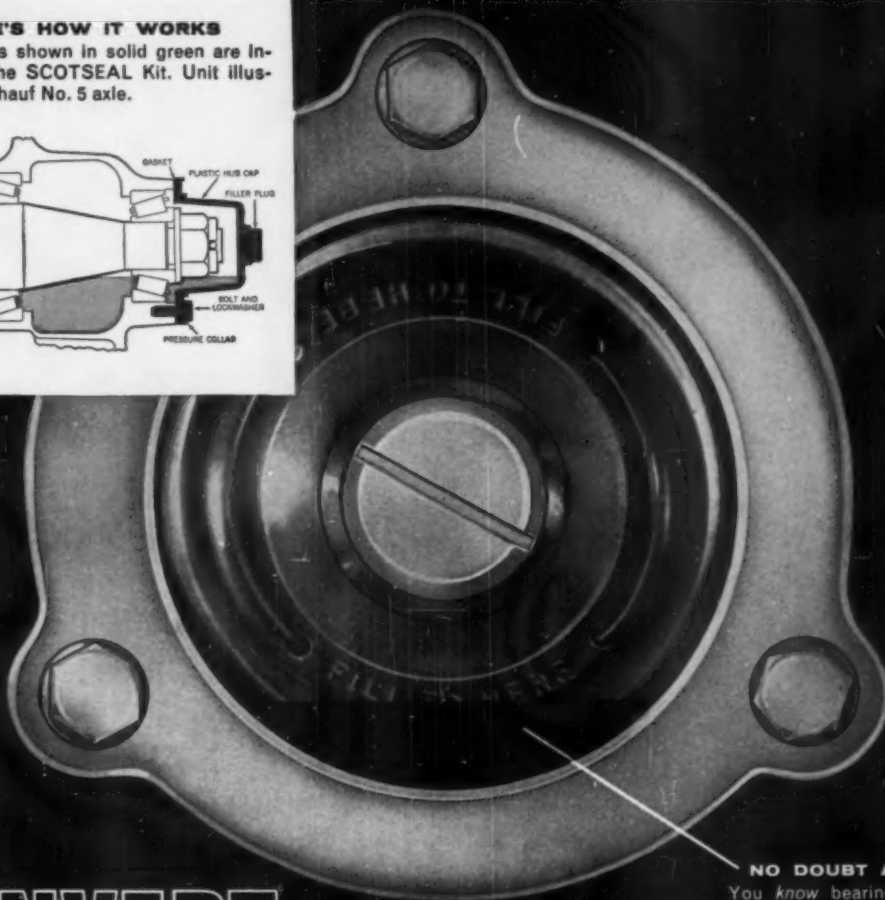
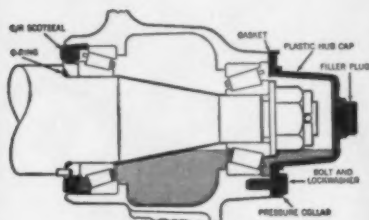
WEIDENHOFF CORPORATION

CABLE: WEIDQUIP	TWX: ALGO 7110	MAIN PLANT AND EXECUTIVE OFFICES ALGONA, IOWA
-----------------	----------------	--

● More details? Circle 198 on reply card inside back cover

HERE'S HOW IT WORKS

All elements shown in solid green are included in the SCOTSEAL Kit. Unit illustrated: Fruehauf No. 5 axle.



NO DOUBT ABOUT IT!

You know bearings are protected. With SCOTSEAL, you actually see the oil level through transparent hub caps.

CONVERT TO OIL WITH C/R SCOTSEAL^{T.M.}

Trailer Axle Oil Sealing Kit

- Adds to Bearing Life
- Decreases Maintenance
- Reduces Down-Time
- Fleet-Proved

Any way you look at it—dependability or cost—C/R oil-lubrication of trailer wheel bearings brings you many economies. (1) No more grease repacks—oil lasts from one brake reline to the next. (2) No burned-out bearings due to postponed repacking. (3) Less drag, lost power, and fuel wastage, because the SAE-30 oil remains free-

*Patents Applied For.

flowing winter and summer. (4) More complete protection for brake linings against lubricant leakage.

Ask your C/R Supplier to show you the new C/R SCOTSEAL Kit* and the ingenious SCOTSEAL Installation Tool* that makes installation fast and simple. Here's a real money-saver in trailer operation. Don't put off a test application.

Installation is as easy as repacking and just as fast!

FREE FOLDER NOW READY

For complete information on the only conversion kit that permits the use of SAE-30 oil, ask your C/R Supplier for this new, free folder. Or, if you prefer, we'll be glad to mail direct.



**CHICAGO RAWHIDE
MANUFACTURING COMPANY**
SERVICE SALES DIVISION
CHICAGO 22, ILLINOIS

SEAL OF PROVED PERFORMANCE

• More details? Circle 199 on reply card inside back cover

LOOKING FOR



BETTER "EYE" APPEAL?

Make your fleet sell as well as deliver

Does your fleet have eye and safety appeal? Is paint durability a problem? What about weather resistance, color and gloss retention? Is the finish easy to apply? Does it dry fast with complete coverage?

If you answered no, or don't know the answer to all these questions, you will want to learn more about KEM® TRANSPORT ENAMEL and the Fleet Painting Specification Service now offered by The Sherwin-Williams Company.

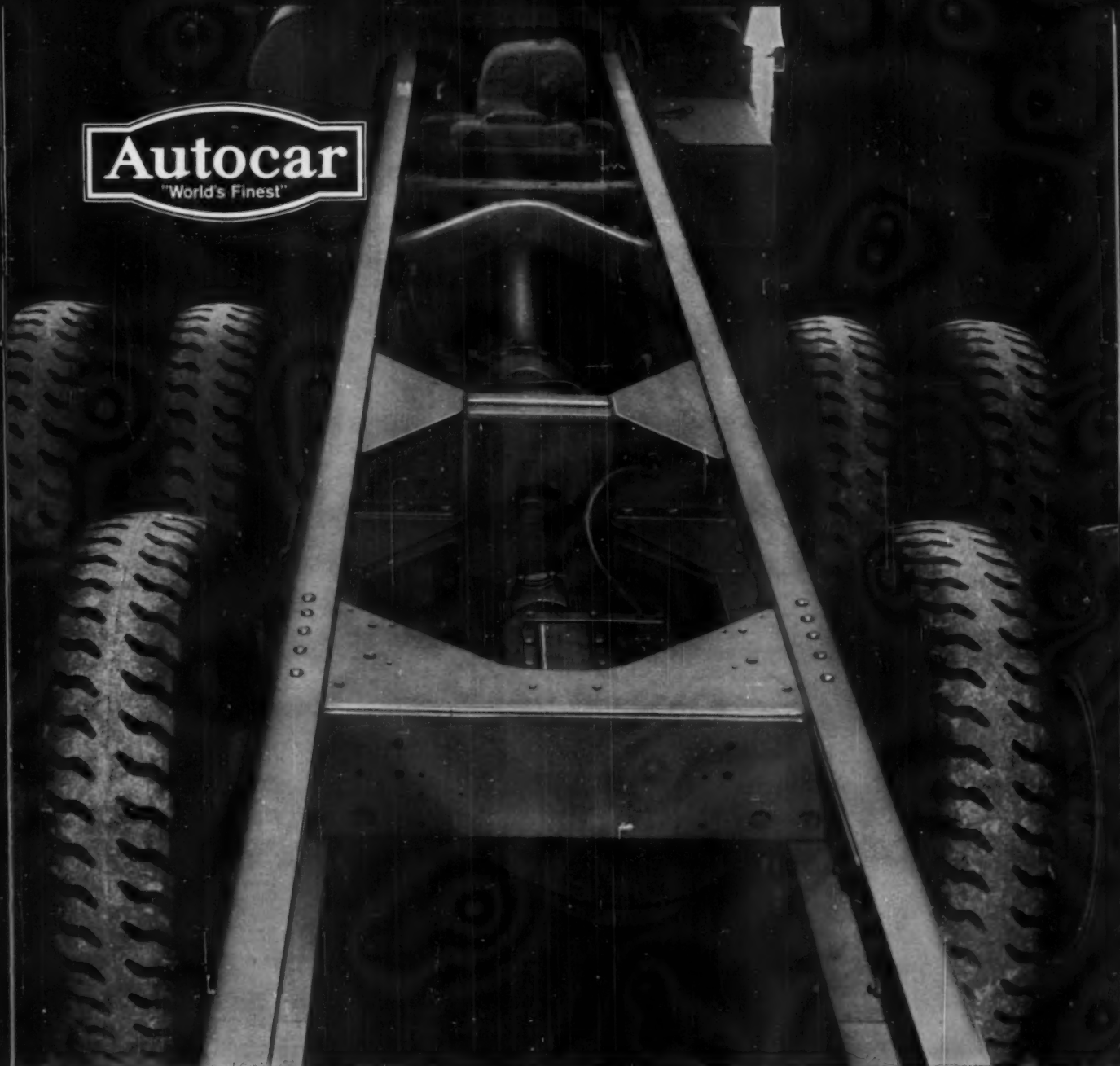


SHERWIN-WILLIAMS
AUTOMOTIVE FINISHES



SEND FOR YOUR FREE COPY OF THIS
NEW GUIDE TO "BETTER EYE APPEAL"

Address The Sherwin-Williams Company,
Automotive Division, Cleveland 1, Ohio,
and Montreal, Canada. Export Division,
Newark 1, New Jersey.



FRAME FOR THE "World's Finest"

A truck cannot possibly be better than its frame. This is Autocar's philosophy, and we build the truck frame accordingly.

Analysis comes first. Precisely *what* is being hauled—*where* will stress and strain fall—how will the conditions of terrain and load be met? Many answers are needed be-

fore blueprints are drawn and custom-building begins.

Then Autocar starts with the finest rails money can buy: heat-treated chrome-manganese molybdenum steel. Nut-and-bolt construction throughout, as in modern skyscrapers. No extra holes in the frame—only those drilled to specifications.

Result: a frame rigid enough to support the load and maintain component alignment, yet sufficiently flexible for high roadability. Autocar quality starts with the frame, and never stops, for the life of the truck. Take Autocar, nothing less. Comprehensive White-Autocar service throughout the United States.



Division of
The White Motor Company
Exton, Pa.

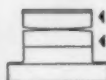
● More details? Circle 201 on reply card inside back cover



new

optical precision
mirror smooth

**POLISHED
TUNGSTEN
CONTACTS**



BOTH CONTACTS
have
EXTENDED RADII
for maximum
surface contact

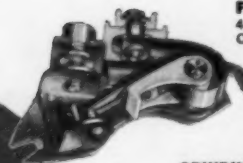
another advance in
*"the Crown Jewels
of Ignition"*

brings you a new,
never-before possible
freedom
from **blemishes**
pitting
misalignment

it all adds up to lower
cost per-mile ignition
performance.

Filko
*Crown Jewels of
Ignition*

F. & B. Mfg. Co.
4248 W. Chicago Ave.
Chicago 51, Illinois



GRINDING and POLISHING
for eyeglasses, microscopes and
telescopes are examples of precision
tolerances and perfection such as are
now embodied in the new mirror smooth
contacts in Filko Contact Sets for cars,
trucks, tractors, marine,
fractional h.p. engines.

G-116 CCJS



See us at the I.A.S.I. Show—Booths No. 1223-24.

**GET FAST
COOL** *Cutting Action!*



BUY
→

SIoux

**SANDERS AND
ABRASIVE DISCS**

NEW



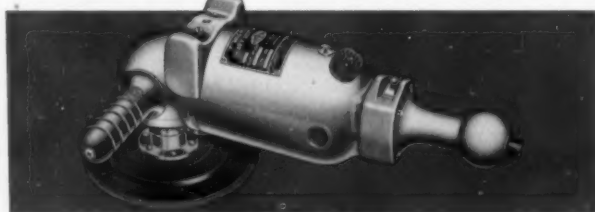
Air Driven **Flat Sander**



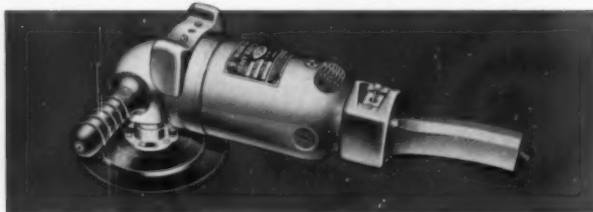
Exclusive design features include a remote exhaust system which carries exhausting air and lubricant away from the work and the operator; a palm switch paddle for convenient, comfortable one hand control; and the efficient Sioux mechanical design which requires up to 30% less air for the same amount of work. Oscillating orbital action produces a superior finish; for wet or dry sanding. It's powerful, light, and perfectly balanced for feather edging.

Powerfully Dependable

SIoux HIGH SPEED H. D. SANDERS



SMOOTH, powerful Sioux Sanders operate with cost cutting speed and ease. They're designed with stamina and dependability for the most punishing use. Heat



treated gears, and permanently lubricated bearings help assure long, trouble-free life. They're the best buy in the long run.

SIoux ABRASIVE DISCS

cut fast, run cool!

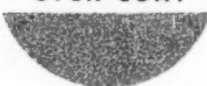
INDUSTRIAL



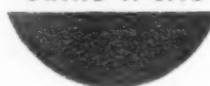
REGULAR



OPEN COAT



GRIND-A-LITE



INDUSTRIAL—As compared with regular discs Sioux Industrial Discs have 31% more fibre shear strength to keep the disc from flying apart under severe use; 39% more grain to provide more cutting points; and 49% more resin to securely bond the extra grain.

REGULAR—Regular discs are intended for work on light gauge metal where heat generated by heavier type might cause warpage or metal expansion. Resin bond tempered aluminum oxide grain is used on Regular and all Sioux discs for maximum cutting action.

OPEN COAT—Open coated discs are intended for paint removal, and for cooler grinding on curved, or recessed surfaces. They are recommended for use anywhere an abrasive is needed that should not load or clog.

GRIND-A-LITE—The new Grind-A-Lite disc is intended for general sanding operations on light gauge metal. It is light, flexible and excellent for use on contoured surfaces. It cuts sharper, runs cooler, loads less, and lasts longer than most other discs.

Find Your Nearest **SIoux** Distributor in the Yellow Pages
Under "Tools, Electric"

ALBERTSON & CO., INC.

SIoux CITY, IOWA, U.S.A.



AIR IMPACT WRENCHES • AIR SCREWDRIVERS • ELECTRIC IMPACT WRENCHES • DRILLS • SCREWDRIVERS • GRINDERS
• SANDERS • POLISHERS • FLEXIBLE SHAFTS • PORTABLE SAWS • VALVE GRINDING MACHINES • ABRASIVE DISCS.



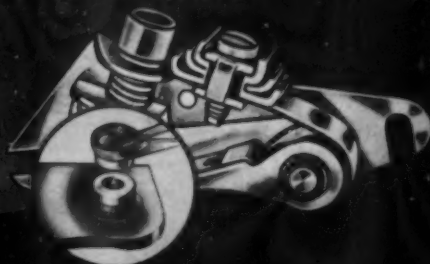
'pierced' tungsten?
of course **ECHLIN** has it!

**THE
HOLE
STORY**

Pierced or "ventilated" tungsten for ignition contacts is not new to the industry or to ECHLIN. This principle was invented over 20 years ago.

You will be seeing more pierced tungsten contacts on new cars and in the replacement market. Pierced tungsten does have some advantages. It may assist in easier starting at temperatures of 15° below zero and lower. At such temperatures the resistance in the coil primary is so low that contacts may oxidize quickly. However, in normal operation, laboratory and field tests clearly show that ECHLIN heavy duty, crowned and burnished, solid tungsten gives equal starting and longer life.

To meet all requirements ECHLIN provides regular, heavy duty and heavy duty pierced tungsten contact assemblies for all four American ignition systems.



ECHLIN *Ignition*

THE ECHLIN MANUFACTURING COMPANY • BRANFORD, CONN.
UNITED PARTS DIVISION • CHICAGO, ILL.

ECHLIN - UNITED OF CANADA, LTD. • TORONTO

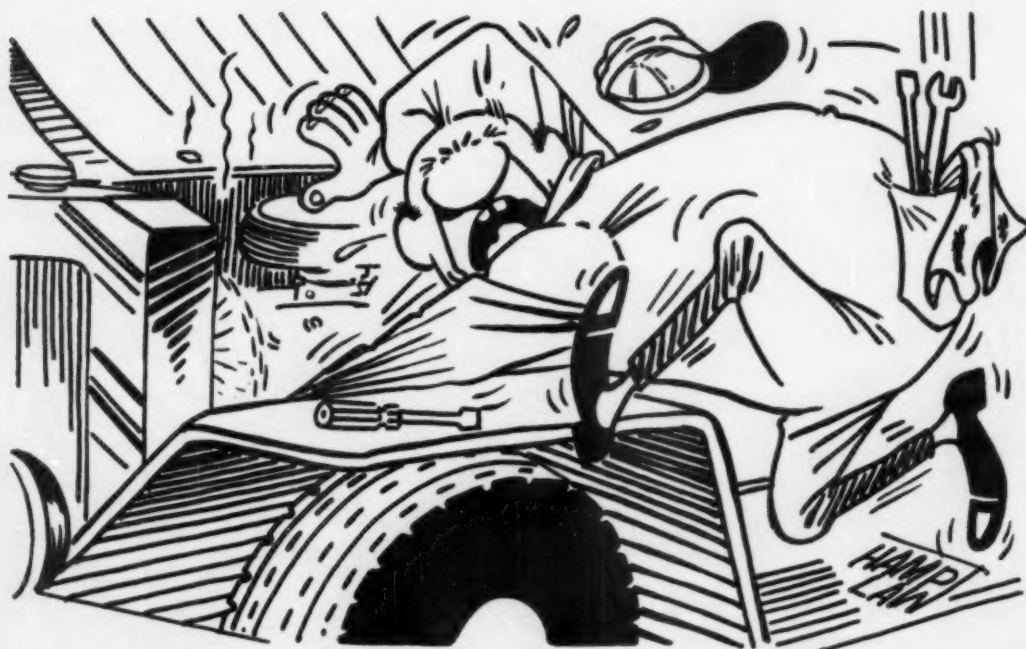
IGNITION & ELECTRICAL PARTS • HYDRAULIC & POWER BRAKE PARTS • BRAKE CABLES • BRAKE FLUID • SPEEDOMETER CABLES

CCJ COMMERCIAL CAR JOURNAL BULLETIN BOARD

Belts, when moving,



Can be finger removing!



SHUT 'ER DOWN!

Reprints available at nominal cost—for details, circle 499 on reply card inside back cover

HASTINGS

Flex-Vent Oil Ring

with stainless steel expanding spacer

Easiest to install... can't go in wrong
Greatest oil drainage... can't clog

Now you can get a conformatric oil ring that's easy to install—and won't plug up.

It's the Hastings Flex-Vent—the world's easiest ring to install. Spacer and rails spiral-on in no time flat... and you can't install them incorrectly, even if you tried.

Hastings Flex-Vent has the most drainage of all oil rings. You can see the ample ventilation that assures efficient drain-back—prevents clogging—gives long-lasting oil control.

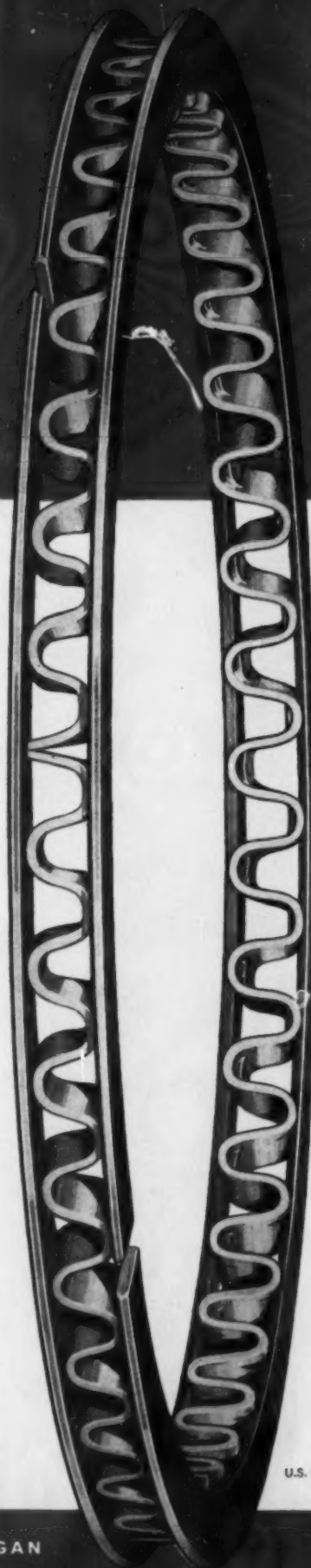
The stainless steel spacer resists corrosion and prevents build-up of sludge and carbon deposits. Built-in tension makes this ring conform to cylinder walls in straight, tapered or out-of-round bores. Side sealing is built-in, too—for positive oil control.

Flex-Vent Sets, with stainless steel spacers are available in steel or chrome sets for passenger cars; in chrome for heavy duty service.

TOUGH BUT OH SO GENTLE

TOUGH
on oil pumping

GENTLE
on cylinder walls



U.S. Pat. No.
2866230

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN

Piston Rings, Oil Filters, Casite Additives, Spark Plugs



MIDLAND MAKES MASSIVE BREAKTHROUGH

TRUCK MANUFACTURERS AND
FLEET OPERATORS PREFER
MIDLAND COMPRESSORS BECAUSE...

LIGHT WEIGHT—10% to 20%
weight saving through use of
non-ferrous materials.

LESS H.P. REQUIRED per cubic
foot of compressed air deliv-
ered, due to efficient valving
and ability to dissipate heat.

AIR DELIVERY INCREASED
continuously with compressor
R.P.M. due to free flow and
efficient valving.

LESS CARBON FORMATION
due to unrestricted circulation
of air during the unloaded
cycles.

**PISTONS HAVE ONLY TWO
COMPRESSION RINGS** and one
double land oil ring, resulting
in minimum wear of cylinder
walls.

**MAXIMUM CONTROL OF OIL
PASSING** because patented
flapper type inlet valves pre-
vent high vacuum above the
piston on down strokes.

DISC TYPE EXHAUST VALVES
built into the cylinder head
provide compactness of as-
sembly and ease of service.

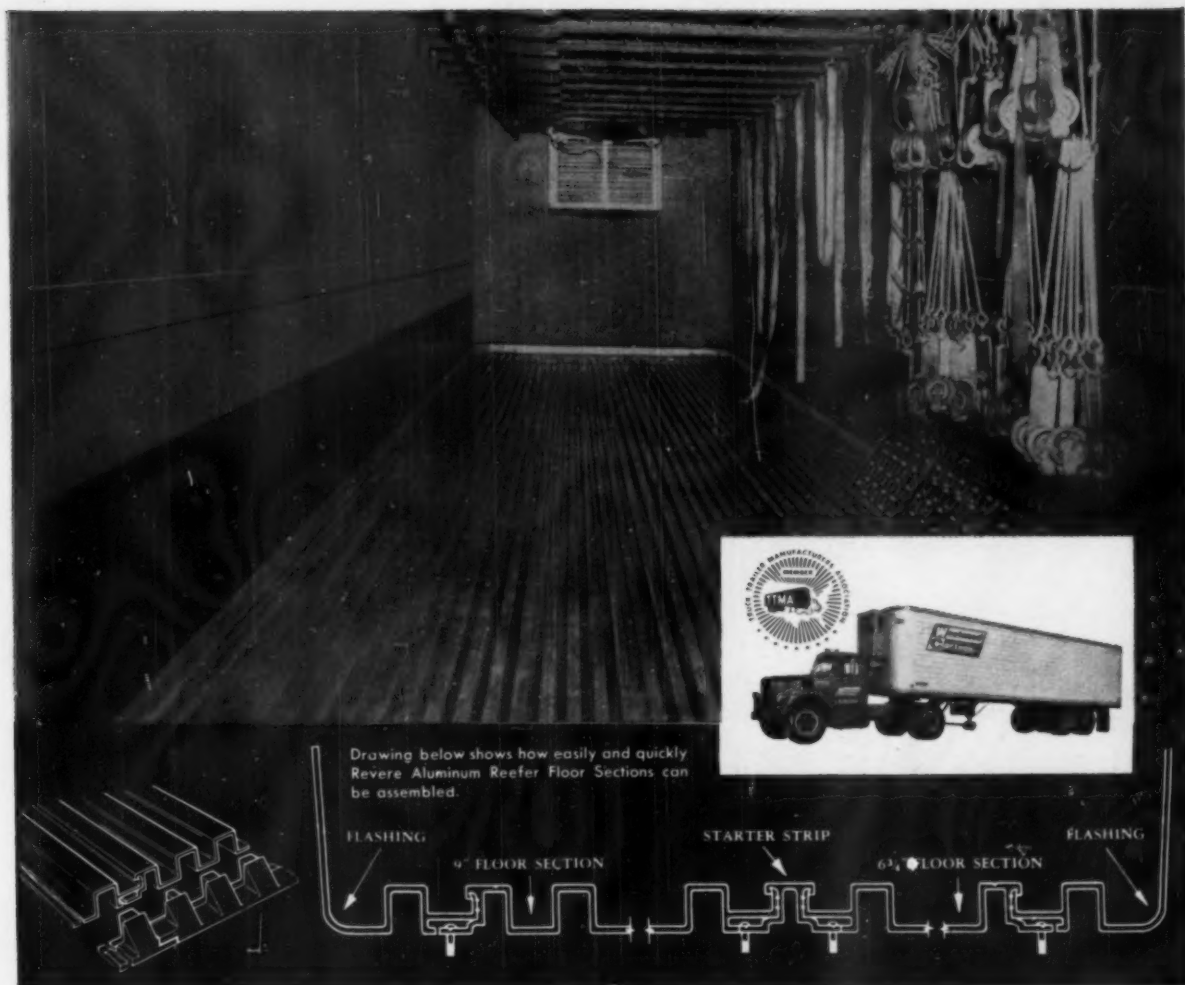
For further information write:

MIDLAND



MIDLAND-ROSS CORPORATION
Owosso, Michigan





REVERE ALUMINUM REEFER FLOOR SECTIONS*

"Far superior to all others"



says JOHN J. MCCARTHY, JR., President, WESTWOOD CARTAGE, INC., Westwood, Mnss.

"We have found Revere Aluminum Reefer Floors to be extremely durable and still watertight after years of hard service . . . and this is very important to us," continued Mr. McCarthy.

"In addition to their durability, these floors permit free circulation of air under and around the load. They are easy to keep clean, and bolts and bolt holes are concealed so water can't seep through to rot the sub-frame."

Low maintenance, added payload and space, and the no-splinter advantage of aluminum, are other features users like about Revere aluminum reefer floor sections.

Both users and equipment builders will be particularly interested in the drawing above which shows Revere's

special interlocking design for watertight construction, flexibility in floor widths provided by the 6 $\frac{3}{4}$ " and 9" sections, the concealed bolts and bolt holes, interlocking starter strip for easy assembly, and multi end-plug castings.

SEND FOR SAMPLES AND LITERATURE TODAY!

Specify Revere Hi-Air-Flo or Standard Reefer Floors, or Dry Freight type. Revere Reefer and Dry Freight Floors are available for prompt delivery from stock. For more information get in touch with the nearest Revere Sales Office.

*U. S. Pat. No. 2,788,556



REVERE
COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801
230 Park Avenue, New York 17, N. Y.
Sales Offices in Principal Cities

1960 New Truck Registrations*

STATE	Brack- way	Chevy- rolet	Dis- mond T	Dodge	Ford	G.M.C.	Intern- ational	Mack	Stude- baker	White	Willys Jeep	Willys Truck	All Others	Total
Alabama	Oct. 1	462	1	42	338	102	101	10	8	17	11	10	31	1,133
10 Mos.	1	5,523	38	577	4,437	1,398	1,398	318	44	269	54	86	494	14,613
Alaska	Oct. 1	13		1	17	17			2		1	1	12	74
10 Mos.		214	3	25	174	177	197	14	18	2	9	22	126	978
Arizona	Oct. 1	359	1	87	311	98	71	3	11	4	105	21	47	1,030
10 Mos.		3,675	12	788	3,149	1,046	760	18	71	79	105	192	575	10,646
Arkansas	Oct. 1	474		51	311	117	68		4	6	4	1	6	1,064
10 Mos.		5,572	12	472	4,750	1,280	64	41	82	84	45	41	180	13,968
California	Oct. 1	2,542	6	419	3,112	644	617	41	44	52	101	94	618	8,260
10 Mos.		31,891	143	3,775	31,039	7,161	6,177	228	499	615	887	870	8,479	89,052
Colorado	Oct. 1	459	2	72	421	99	68	6	10	7	73	39	23	1,279
10 Mos.		4,820	18	721	3,916	1,211	1,120	52	95	104	461	376	291	12,985
Connecticut	Oct. 3	205	3	48	170	70	102	12	8	59	16	35	93	824
10 Mos.	13	1,520	29	285	1,464	549	951	154	52	231	100	225	625	6,201
Delaware	Oct. 1	56		13	48	19	41		1	1	6	10	206	
10 Mos.	12	599	10	137	491	180	388	150	6	82	8	27	91	2,159
District of Columbia	Oct. 1	65		3	82	25	12		5		2	4	28	214
10 Mos.	1	734	8	112	618	231	211	83	4	44	10	44	247	2,327
Florida	Oct. 1	607	9	83	790	205	175	28	14	16	48	92	163	2,230
10 Mos.		6,646	111	754	7,986	2,053	2,234	380	114	530	384	670	2,006	23,770
Georgia	Oct. 1	474	1	59	504	180	141	40	1	12	8	17	86	1,463
10 Mos.		7,210	43	968	7,251	1,767	2,409	338	121	330	92	143	593	21,565
Hawaii	Oct. 1	32		9	50	10	16		2			13	41	173
10 Mos.		485	2	157	549	96	273	1	2	46	29	279	278	2,195
Idaho	Oct. 1	170		149	77	115	77	1	10	1	7	20	70	707
10 Mos.		2,184	9	399	1,813	968	895	38	73	87	85	205	177	6,831
Illinois	Oct. 1	640	9	168	779	181	330	26	30	22	51	94	170	2,670
10 Mos.		9,725	248	1,502	8,986	2,456	4,977	321	244	480	295	631	1,828	31,083
Indiana	Oct. 1	506	5	89	479	129	241	38	27	31	10	32	82	1,669
10 Mos.		6,584	90	1,002	5,995	1,753	3,082	370	263	415	111	281	955	20,481
Iowa	Oct. 1	493	1	79	372	104	184	1	13	8	15	26	63	1,361
10 Mos.		4,374	48	510	3,652	995	2,295	46	95	77	84	147	489	12,812
Kansas	Oct. 1	637	1	50	443	128	146	5	5	9	22	1	67	1,467
10 Mos.		5,824	24	802	4,989	1,474	1,707	12	88	67	68	175	233	15,273
Kentucky	Oct. 1	411	1	45	200	88	134	5	5	22	10	15	37	973
10 Mos.		4,391	13	416	3,447	1,061	1,456	99	46	154	112	189	328	11,692
Louisiana	Oct. 1	558	2	34	487	104	110	2	8	10	14	12	90	1,439
10 Mos.		6,070	31	360	5,984	1,173	1,433	96	82	115	94	194	624	15,746
Maine	Oct. 2	141		25	184	66	94	4	4	2	25	26	34	587
10 Mos.	17	1,365	4	178	1,484	481	945	49	45	45	116	239	278	5,246
Maryland	Oct. 1	247	42	227	32	129	14	3	13	9	52	66	88	1,189
10 Mos.	52	2,958	22	535	2,791	599	1,900	198	26	215	210	373	498	9,979
Massachusetts	Oct. 4	265	4	66	252	115	176	46	8	38	25	68	112	1,771
10 Mos.	85	2,546	26	648	3,110	1,139	1,711	279	58	331	182	482	972	11,519
Michigan	Oct. 1	1,049	5	191	752	353	320	7	27	32	69	88	109	2,972
10 Mos.	16	11,015	87	1,979	10,372	3,629	2,812	294	170	414	384	713	1,649	33,444
Minnesota	Oct. 1	509	2	127	334	101	210	8	13	4	8	16	47	1,379
10 Mos.	4	4,884	49	705	4,448	1,116	2,113	90	139	118	62	179	506	14,413
Mississippi	Oct. 1	241		29	304	82	113	3	3	3	3	15	82	515
10 Mos.		4,424	6	356	3,553	1,029	1,270	63	61	31	51	57	258	11,199
Missouri	Oct. 1	533	3	81	400	163	175	8	7	17	10	18	37	1,450
10 Mos.		8,256	57	890	6,313	2,322	2,783	94	108	188	102	199	476	21,758
Montana	Oct. 1	180	3	43	238	64	139	3	9	5	9	41	22	756
10 Mos.		1,982	18	373	1,632	566	938	38	42	62	95	297	232	6,395
Nebraska	Oct. 1	382	2	39	405	92	161	5	6	3	20	27	38	1,190
10 Mos.		3,682	46	321	3,371	818	1,580	133	45	132	97	203	343	10,791
Nevada	Oct. 1	68		15	108	46	122		5	6	12	14	297	
10 Mos.		673	3	179	655	389	322	32	34	12	54	92	192	2,623
New Hampshire	Oct. 1	61	2	11	79	20	38	1	5	5	15	27	36	262
10 Mos.	7	821	27	150	908	226	485	149	17	51	95	290	292	3,438
New Jersey	Oct. 15	536	15	124	552	235	240	39	12	34	38	82	143	2,058
10 Mos.	173	4,840	136	1,069	5,964	1,947	2,691	552	83	655	246	824	1,812	20,882
New Mexico	Oct. 1	301		34	258	83	63	1	13		23	21	20	817
10 Mos.		3,206	4	347	2,490	899	538	20	63	38	129	134	147	8,006
New York	Oct. 31	821	14	216	1,109	480	680	94	25	131	140	199	287	4,307
10 Mos.	280	10,811	140	2,112	11,136	3,648	7,854	1,052	156	1,403	816	1,551	3,109	43,948
North Carolina	Oct. 1	599	1	120	707	185	245	17	15	42	19	21	63	2,034
10 Mos.	1	6,556	26	788	7,480	1,683	1,925	247	125	325	170	207	683	20,266
North Dakota	Oct. 1	149		23	141	34	112	1	1		3	3	5	470
10 Mos.		1,446	13	228	1,329	318	976	2	21	2	13	34	49	4,328
Ohio	Oct. 2	980	7	263	788	263	290	29	27	116	62	112	120	2,879
10 Mos.	26	9,512	121	1,058	9,074	3,044	4,345	463	215	916	419	849	1,561	32,436
Oklahoma	Oct. 1	686		52	499	144	143	13	7	9	6	8	13	1,580
10 Mos.		7,510	11	736	6,064	1,424	1,792	89	94	157	61	164	212	16,244
Oregon	Oct. 1	325		145	419	120	4	74	34	14	25	74	90	1,313
10 Mos.		4,342	19	710	3,670	1,633	1,386	122	228	598	155	420	983	14,486
Pennsylvania	Oct. 14	734	17	204	981	264	452	74	10	65	119	175	139	3,248
10 Mos.	159	8,922	217	2,351	8,817	2,629	5,939	1,251	216	892	856	1,506	1,950	34,406
Rhode Island	Oct. 1	37		21	180	15	27	5	1	5	4	33	334	
10 Mos.	3	386	3	99	743	122	282	69	14	31	12	46	288	2,110
South Carolina	Oct. 1	335		39	305	109	83	6	1	6	5	7	32	928
10 Mos.		3,438	3	434	3,042	687	945	97	23	100	70	51	341	8,141
South Dakota	Oct. 1	191		30	158	39	98	2	6	1	7	12	12	556
10 Mos.	2	1,733	21	274	1,515	428	1,189	16	43	23	42	100	119	5,485
Tennessee	Oct. 1	583	7	73	443	123	143	30	9	25	21	14	35	1,519
10 Mos.		5,434	19	580	4,902	1,503	1,664	304	89	271	118	139	351	15,384
Texas	Oct. 1	2,680	5	189	1,854	446	450	20	27	66	83	57	110	5,788
10 Mos.	1	28,044	70	1,867	19,491	4,240	5,835	374	288	798	474	403	1,470	63,496
Utah	Oct. 1	122	2	34										

* Compiled from official state records. Data property of R. L. Polk & Co. May not be copied, sold or reprinted without Polk permission.



Sealed Power Stainless Steel Oil Ring

THIS OIL RING IMPROVES FLEET EFFICIENCY

Since its introduction in 1957 engines, Sealed Power's Stainless Steel oil ring has won engine builder acceptance faster than any by far.

New truck engineers, tests, and millions of miles of actual on-the-road operation, proved this ring out for you. No ring yet controls oil as well. Take Sealed Power's

Stainless Steel oil ring—your ability to turn out a good overhaul—and you have an unbeatable combination.

The Stainless Steel oil ring side-seals, holds its fit, retains its tension, resists sludging and corroding, is easy to install. Sealed Power Corporation, Muskegon, Michigan.



Sealed Power Stainless Steel piston rings stop oil pumping

VISIT OUR BOOTH NO. 2456-7-8-9 AT THE I.A.S.I. SHOW IN LOS ANGELES, FEBRUARY 17-18, 1961

● More details? Circle 208 on reply card inside back cover

ERIE, PENNSYLVANIA
HOME OF
ERIE WHEELS
AND
BRAKE DRUMS

ERIE *Wheels*
Brake Drums

AUTOMOTIVE WHEEL DIVISION ERIE MALLEABLE IRON CO., ERIE, PA.



Diamond T Model 4300 six-wheeler

New from Diamond T...gas jobs that live longer, cost less to own and to run!

WHEREVER men talk trucks, sooner or later the topic turns to Diamond T's new gas jobs. Why? Because these Diamond T's earn more . . . get better gas mileage, have snappier performance and require less maintenance. Each is custom-built to fit the job, and each has Diamond T quality from bumper to rear crossmember.

Wet sleeve construction

Diamond T's modern, short-stroke engine design means more useable power, less engine mass. Blocks and heads are cast of non-warping chrome-moly alloy iron; exhaust valves are sodium-filled, stellite faced. And because they have *wet-sleeve construction*, these Super-Service engines live longer.

Wet sleeves are true cylinders, machined inside and out, free from warping and distortion. At overhaul time—you don't. You *rebuild* to original factory dimensions and tolerances at far less cost than a rebore job. Operators have discovered Super-Service engines have no age limit.

Exceptionally sturdy cab

Chassis and cab are designed for long life, as well as enduring appearance. The rugged cab is all steel, welded, with heavy-duty 3-point suspension. It is tight, rattle-free, well insulated and drivers like it.

Whatever your job, there's a Diamond T that will do it better at lower cost. See your Diamond T dealer soon.

DIAMOND T TRUCKS

Established 1905



**The Diamond
is for Quality**

CUT YOUR BRAKE MAINTENANCE COSTS IN HALF!

Largest fleet operators in the country report more dependable stopping ability plus 50 to 100% increase in brake life. Drivers report no fade and exceptional stability with greater safety for themselves and load over all kinds of terrain.



"CHIEF"
PREMIUM
QUALITY
HEAVY DUTY
BRAKE BLOKS

“ Drivers report no fade on California ridge route with ability to stop anywhere.

*Doudell Trucking Co.
San Jose, California*



“ . . . have increased our brake mileage 100% . . . more dependable stops.

*Sick's Rainier
Brewing Co.
Spokane, Washington*

“ . . . best performing we ever had . . . cut maintenance costs in half.

*Leatham Bros., Inc.
Salt Lake City, Utah*



Many fleets have converted to "Chief". Many heavy duty vehicle manufacturers have tested, approved and adopted "Chief" premium quality brake bloks for their all around performance characteristics!

FOR FURTHER INFORMATION

CONTACT DETROIT SALES OFFICE

20225 Mack Ave. Detroit 36, Mich.
Product of Carlisle Corp. Molded Materials Div., Ridgway, Pa.

● More details? Circle 211 on reply card inside back cover

176

More Profit \$\$

with

KIM
Hotstart
REG. U.S. PAT. OFF.

KEEP RIGS ROLLING

with KIM HOTSTART Electric Pre-Heater! — Engines are kept warm between runs, eliminating inside heated terminals. KIM provides instant cold weather starting; reduces service tie-ups and costly repairs. KIM plugs into an electric circuit; draws off cold water from engine; heats and circulates it through engine. Approved and used by all major engine manufacturers.

**For your DIESEL
& GAS ENGINES**



SEE YOUR DEALER
or write for
free literature

KIM HOTSTART Manufacturing Company

West 917 Broadway Avenue, Spokane 1, Washington

● More details? Circle 212 on reply card inside back cover

"THE ATLAS OF TRUCK LIFTS"

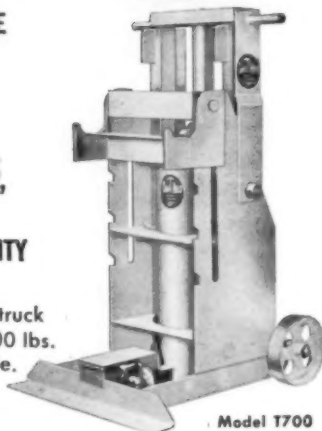


**5 ADJUSTABLE
RANGES FOR
SADDLE**

**3 LIFTING
POSITIONS...
(SADDLE, TOP,
CARRIAGE)**

7 TON CAPACITY

Passenger car & light truck
Model P600, with 5000 lbs.
capacity also available.



Model T700

Only
\$369.50
List

Write for information

SAV-T-ENGINEERING CO.
316 E. Beach Ave. Inglewood, California

● More details? Circle 213 on reply card inside back cover

COMMERCIAL CAR JOURNAL, January, 1961

January News Roundup

Truck stop operators organize

WASHINGTON, D.C.—Truck stop operators meeting here last month formed a new national association—NATSO. The initials stand for National Assn. of Truck Stop Operators. Oran V. Jarrell, Jarrell & Glancy Truck Terminals, Hewlett, Va. was named first president. Offices will be at Suite 306, 2000 Florida Ave., N.W., Washington, D.C.

Railway man accuses government

CINCINNATI, OHIO—At the 37th annual meeting of the Ohio Valley

Month	0,000 lb. and less	6,001-10,000 lb.	10,001-14,000 lb.	14,001-18,000 lb.	18,001-22,000 lb.	22,001-26,000 lb.	26,001-30,000 lb.	Over 30,000 lb.	Total
January	51,985	14,430	1,111	2,682	15,484	4,965	2,934	2,966	96,178
February	57,489	15,286	986	2,402	13,471	6,004	3,299	3,369	102,305
March	58,878	15,714	989	2,611	13,261	6,715	3,760	3,502	105,438
April	48,780	14,953	881	2,302	12,282	6,182	3,760	3,406	92,567
May	48,216	13,739	900	2,294	13,646	6,073	3,188	3,214	91,268
June	48,021	12,990	865	2,403	12,626	5,999	2,930	2,968	89,022
July	30,861	9,633	710	2,284	10,275	5,166	2,420	2,504	64,953
August	25,995	8,456	520	2,454	8,418	3,605	1,990	1,782	53,331
September	35,941	9,110	715	1,946	10,522	3,948	2,064	1,860	66,066
October	35,054	8,696	659	1,613	7,561	3,174	1,721	1,609	60,569
10 Months—1960	441,232	123,397	8,836	22,901	117,746	51,912	28,081	25,942	820,747
10 Months—1959	415,689	129,189	11,050	22,342	96,966	49,503	33,822	31,295	826,728

Source: Automobile Manufacturers Association.

Transportation Advisory Board held here early last month, J. Handy Wright (Assn. of American Railroad public relations vice president) did more than blame government regulation for railroad troubles. Said Wright, "Government meddling has brought the current mess in transportation, and the answer is not to bring government further into the field but to get it further out."

Anti-trust efforts to step up

WASHINGTON, D.C.—There'll likely be increased anti-trust activity in the new administration. Justice Dept. is expected to continue its present program against activities skirting the

edge of anti-trust legislation. Federal Trade Commission wants to increase its police activities. It will ask Congress for a 50 per cent budget increase, wants to add 650 persons to its staff.

GMTA gets new address

ATLANTA, GA.—Georgia Motor Trucking Assn. has moved into new and expanded headquarters at 500 Piedmont Ave., N.E. Atlanta Ga.

West Coast Truck Show sets new '61 dates

LOS ANGELES — Revised dates for (TURN TO PAGE 180, PLEASE)

Ten Top Dollar Volume Carriers

MEETING FLEET requests for current operating data, here's the second appearance of a new exclusive report for COMMERCIAL CAR JOURNAL readers. First one, giving the "Top 10" for the second quarter was in the October issue, page 178. Prepared four times a year by *Carrier Reports*, Old Saybrook, Conn., and

based on quarterly reports of ICC Class 1 common carriers, it is scheduled to run in the third issue after the close of the quarter. *Carrier Reports* itself is a quarterly publication giving this same and additional data on all Class I ICC carriers. It's available on a subscription basis. For more details, circle 355 on the reply card.

3rd Quarter 1960

Carrier	Year	Total Operating Revenue	Total Expenses	Net Operating Revenue	Net Income Before Taxes	Net Income After Taxes	Operating Ratio
1—Consolidated Freightways, Menlo Park, Cal.	1960 1959	\$25,775,869 18,443,536	\$24,782,287 17,202,331	\$1,013,482 1,241,205	\$356,239 971,651	\$301,239 801,279	96.1% 93.3
2—Allied Van Lines, Broadview, Ill.	1960 1959	19,390,287 17,175,570	19,402,711 17,176,032	-12,424 -1,262	0 0	0 0	100.0 100.0
3—Associated Transport, New York, N. Y.	1960 1959	18,800,504 18,073,299	18,274,171 17,163,235	526,333 909,064	432,155 834,209	210,293 408,614	97.2 95.1
4—Roadway Express, Akron, Ohio	1960 1959	16,172,997 15,353,968	14,654,209 14,370,818	1,518,674 983,370	1,406,674 889,099	725,159 423,299	90.6 93.6
5—Pacific Intermountain Express, Oakland, Cal.	1960 1959	15,440,570 16,441,741	14,507,511 15,580,372	933,059 881,369	810,892 708,996	439,935 378,837	93.9 94.6
6—North American Van Lines, Fort Wayne, Ind.	1960 1959	14,500,970 13,362,262	13,149,309 11,732,786	1,355,661 1,629,464	1,363,422 1,776,309	538,679 932,407	90.6 97.0
7—Aero Mayflower Transit, Indianapolis, Ind.	1960 1959	14,120,633 13,350,809	13,138,054 12,147,791	982,579 1,203,025	986,545 1,186,620	536,545 679,979	93.0 91.0
8—Interstate Motor Freight System, Grand Rapids, Mich.	1960 1959	11,933,580 10,506,173	11,674,436 9,994,987	259,144 511,186	167,088 467,630	82,516 267,413	97.8 95.1
9—Denver Chicago Trucking, Denver, Colo.	1960 1959	10,310,791 9,931,965	9,287,125 9,927,820	1,043,666 1,004,385	951,600 940,195	459,100 456,568	89.9 89.9
10—Spector Freight System, Chicago, Ill.	1960 1959	9,825,835 11,041,972	10,017,400 10,545,343	-191,565 496,829	-226,468 471,684	-242,809 281,003	101.9 95.5

Note—Net income before taxes is net operating revenue plus other income (lease credits, interest, dividends, etc.) and minus other deductions (lease debits, other deductions, delayed income charges, etc.). Operating ratio is total expenses divided by total operating revenue. Source: *Carrier Reports*, Old Saybrook, Conn. For further information, circle 355 on the reply card.

New 1961 Fruehauf Volume

ALUMINUM side wall posts on 18" centers
• Trailer strength • Lightweight

INTEGRAL STEEL rear corner posts, header and crossmember
• Stronger • Damage resistant
• Lower maintenance

EXTRA WIDE 88½" rear opening
• Many rear-end enclosure options available

FULL 91" inside width
• Maximum cube with full rubrail protection at sidewalls

STEEL rear corner castings
• Extra protection where it is needed most

TRAILER-STRONG 1⅛" composite floor
• 11 full length steel hat sections afford complete fork-lift protection

5" STEEL CHANNEL mounting rails
• Durable • Longer-lived

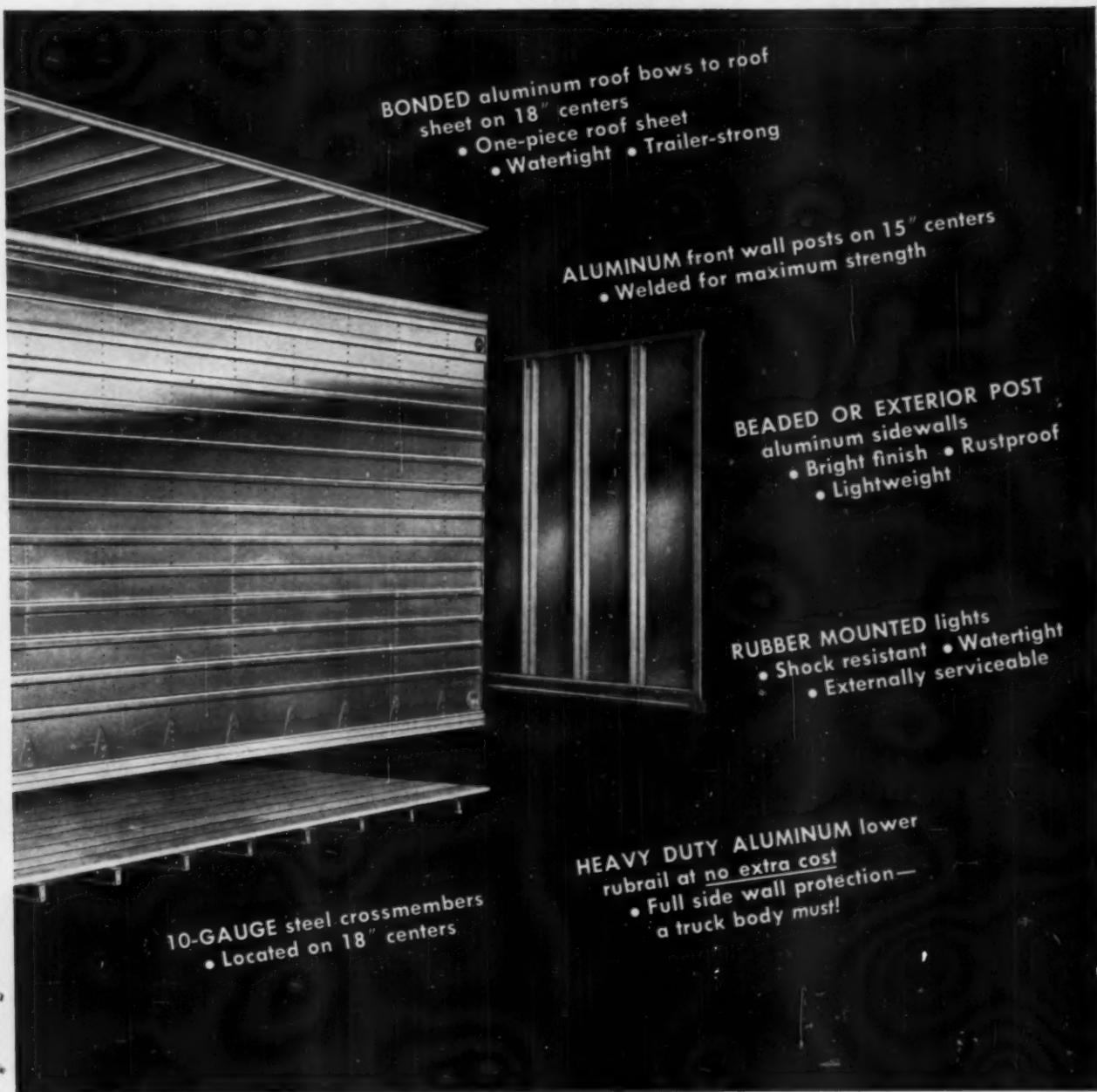
The Only Truck Body Built to the Strength of a Trailer!

The new Fruehauf aluminum Volume[®] Van Truck Body is the *first* truck body specifically designed to incorporate the most advanced features of the truck-trailer. Feature-for-feature, here is the finest truck body being produced today... and it's substantially **LOWER IN COST!**

Your choice of long lasting aluminum beaded panel or exterior post design, with a wide variety of doors, options and lengths. Be sure to see it at your local Fruehauf Branch—or contact Fruehauf Trailer Company, Detroit 32, Michigan.

The Yardstick of Quality in the Trucking Industry!

★Van TRUCK BODY



BONDED aluminum roof bows to roof sheet on 18" centers

- One-piece roof sheet
- Watertight • Trailer-strong

ALUMINUM front wall posts on 15" centers

- Welded for maximum strength

BEADED OR EXTERIOR POST aluminum sidewalls

- Bright finish • Rustproof
- Lightweight

RUBBER MOUNTED lights

- Shock resistant • Watertight
- Externally serviceable

HEAVY DUTY ALUMINUM lower rubrail at no extra cost

- Full side wall protection—a truck body must!

10-GAUGE steel crossmembers

- Located on 18" centers



Beaded Panel or Exterior Post Design

FRUEHAUF TRAILER COMPANY

10952 Harper Avenue • Detroit 32, Michigan

Please send me complete information on your trailer-strong Volume★Van Truck Body.

NAME _____ (please print)

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

January News Roundup

Continued from Page 177

the 1961 National Truck, Trailer & Equipment Show have been announced by the Automotive Council of Los Angeles, Inc. The show will be on April 13, 14 and 15 at the Great Western Exhibit Center.

Piggyback boosts concealed damage

LOUISVILLE, KY.—Concealed damage claims on "piggyback" shipments

jumped sharply during a 6-year period according to one shipper who reported to ATA National Freight Claim Council members here. William Solak of Midwest Freight Forwarding, Chicago, told the Council that his company's records showed a concealed damage claim jump of from 0.9 per cent to 24.7 per cent of total claim losses. "Piggyback" shipments accounted for 29 per cent of tonnage shipped in the period.

Government may stockpile trucks

WASHINGTON, D.C.—Office of Civil and Defense Mobilization is reported

studying stockpiling of materials needed to help the country recover from an unexpected attack. Already labeled necessary for such recovery effort are tank trucks, tank trailers, trucks up to 5 tons (one out of four with power take-offs), tractors, semi-trailers (including low bed models). Question to be answered: Is it feasible to build inventories of these vehicles at various points around the country in case of attack?

Changes for your Buyers' Directory

ERRORS ARE almost impossible to avoid in a project as big as CCJ's Fleet Buyers' Directory. So the 1961 edition, published last November, had its share. Here are changes to make your copy more accurate.

In the Product Directory:

Under BODIES, Commercial — Add Ravens-Metal Products, Inc.

Under FUELS, Gasoline and Diesel—Add Crown Central Petroleum



G-90

STANT'S new additions for '61

Stant's new G-90 Dual-Loc cuts your inventory...replaces G-50 and G-70... ideal for exposed spots as on IHC, GMC, Ford, Chevrolet Trucks. Retains proven Stant features: heavy rust-proofed steel locking members... husky positive-action turn-on type... chromium plated outside... die cast inside... efficient swivel type keyhole cover keeps out dirt and water.

- One Source**
- Pressure Caps
 - Gas Caps
 - Locking Caps
 - Oil Filler Caps



G-40
G-46

new gas caps control surging

Stant's new Gas Caps prevent fuel loss from surging... collapse of gas tank and fuel pump damage from dirt- or ice-clogged tank vent type...stalling from clogged vent. G-40 must be used on 1960 Chevrolet Station Wagons, all 1961 Chevrolets, 1961 Ford and Pontiac Station Wagons... G-46 on 1961 Oldsmobiles.

STANT MANUFACTURING CO., INC.
Connersville, Indiana

Standard of the industry and original equipment for a generation



1960 Truck Trailer Shipments

Type of Trailer	October	Ten Months
Vans		
Insulated and refrigerated.....	327	3,724
Steel.....	34	641
Aluminum.....	293	4,083
Furniture.....	51	1,741
Steel.....	45	1,515
Aluminum.....	6	226
All other closed-top.....	1,716	22,391
Steel.....	679	5,622
Aluminum.....	1,038	16,769
Open-top.....	155	2,367
Steel.....	53	674
Aluminum.....	102	1,693
Total—Vans.....	2,249	31,223
Tanks		
Non- and low-pressure		
Petroleum		
Carbon and alloy steel.....	153	1,324
Stainless steel.....	12	209
Aluminum.....	107	1,467
Total—Petroleum.....	272	3,020
Chemical, food, fluid solids.....	52	639
All other, incl. aircraft refuelers.....	19	904
High-Pressure (LPG), chemicals, etc.....	33	290
Total—Tanks.....	375	4,941
Pole, pipe and logging		
Single axle.....	24	194
Tandem axle.....	45	685
Total.....	69	880
Platforms		
Racks, livestock and stake.....	82	412
Grain bodies, all types.....	79	1,010
Platforms (flat), all types.....	476	7,433
Total—Platform.....	637	8,855
Low-bed heavy haulers.....	183	1,796
Dump trailers.....	86	1,299
All other trailers.....	210	2,962
Total—Complete Trailers.....	3,811	51,967
Dump trailer chassis.....	61	715
Trailer chassis only.....	121	2,544
Total—Trailers and Chassis.....	3,993	55,226
Detachable Van Bodies.....		2,570

Source: Industry Division, Bureau of the Census.

Corp., American Bldg., Baltimore 3, Md.

Under OIL and LUBRICANTS—Add Crown Central Petroleum Corp.

Under PISTON RINGS—Delete Ramco Div., and add Thompson Products Piston Ring Div.

Under PISTON RING EXPANDERS—delete Ramsey Corp.

Under SEATS, BUS—Delete Amesbury Seat Mfg. Co.

Under STEERING GEARS—Add Ross Gear and Tool Co.

Under TIRES and TUBES—Change Dayco Corp. Tire Div. to Dayton Tire and Rubber Co.

Under TIRE RUBBER add Dayton Tire and Rubber Co.

In the Manufacturers' Directory: Delete Amesbury Seat Mfg. Co.

Add Bendix Radio Communications Div., Bendix Corp. E. Joppa Rd., Towson 4, Md.

Add Crown Central Petroleum Corp. American Bldg., Baltimore 3, Md.

Add Dayton Tire and Rubber Co., Dayton 1, Ohio.

Delete Dayco Corp., Tire Div. Add Dow Chemical Co., Midland, Mich.

Add Lofstand Co., 2000 Southland Lane, Rockville, Md.

Change Olson Corp., J.B. to Olson Corp., J.B.E.

Change Ortho-Dynamics Inc. to 3573 E. Colorado Blvd., Pasadena, Cal.

Add Thompson Products Piston Ring, Div. Thompson Ramo Wooldridge Inc., P.O. Box 513, St. Louis 66 Mo.

Change Turner Corp. to 851 Park Ave., Sycamore, Ill.



Massachusetts—prohibits operation of any vehicle not registered in that state unless the vehicle is covered by vehicle liability insurance.

New York—has made amendments to the Highway Use Tax Law. Changes go into effect on Jan. 1, 1961.

Pennsylvania—now removes parked vehicles from the Turnpike that are left in one spot more than 72 hours. If vehicle is not claimed from proper authorities within a prescribed period of time, it will be sold.

(TURN TO NEXT PAGE, PLEASE)



Make them remember your trucks... with

MEYERCORD DECAL TRUCK SIGNS

Whether your trucks travel the nation's highways... or make deliveries on busy city streets... Meyercord Decal Truck Signs will make each vehicle a powerful traveling "salesman" for your product or service! Meyercord Decal Truck Signs are produced for you in an unlimited choice of colors and design... including full-color pictorial reproductions. A constant program of laboratory and "in-use" decal research and improvement has produced the finest, most durable of truck signs... ready to withstand years of weathering and the punishment of year-round road conditions. Another big advantage: absolute uniformity of design on every truck!



Dept. A-515, 5323 West Lake St., Chicago 44, Ill.

• More details? Circle 217 on reply card inside back cover

NOW! PROTECTED WITH COLOR-GARD!

All Meyercord Decal Truck Signs now have the added protection of our exclusive laboratory development, COLOR-GARD—the toughest, most durable "clear" ever produced for the decal and transferable film industry!

"ADS ON WHEELS" Full-Color Brochure Free on Request.

Drop us a line on your firm's letterhead... for full color illustrated brochure, tells how leading national and regional advertisers use Meyercord Decal Truck signs to promote their business.

Kinnear
Kinnear originated the

Rolling
interlocking steel slat
Doors

door that coils upward.

KINNEAR
Solving Ways in Doorways

Rugged, efficient space-saving doors FOR TRUCKS OR ANY OPENING—plus longer lower-cost protection.



The KINNEAR Mfg. Co.
2100-20 Fields Ave.
Columbus 16, Ohio

More details? Circle 260 on reply card



NEW
RETRACT-
ABLE
AUSTIN

Trailer
Legs

Limited
Quantity

(As Pictured
Less Wheels)

SOLD IN
PAIRS ONLY

\$75.00 PER PAIR
F.O.B. DETROIT
PARTS SPECIALTIES

5984 Lincoln Ave.
DETROIT 8, MICHIGAN

More details? Circle 261 on reply card

FOLLOW THIS SIGN TO
ILLINOIS TOLLWAY



Write for
FREE
MAP

ILLINOIS TOLLWAY, Hinsdale, Ill.
Phone HINSDALE FA 3-9000
CHICAGO BI 2-3620



More details? Circle 262 on reply card

Clayton

DYNAMOMETERS INSURE PEAK PERFORMANCE OF RYDER TRUCK RENTAL UNITS



RYDER LEASED TRUCKS "WEIGH-IN" REGULARLY TO CHECK PERFORMANCE

More than 17,000 truck units operated in over half the fifty states of the nation by Ryder Truck Rental are tested periodically by the Clayton Dynamometer. This determines if each unit is operating at peak performance under all conditions.

Ryder also uses the Clayton Dynamometer to test overhauled units under accurately simulated road driving conditions before being returned to service. After-service checks prove service workmanship . . . allow fine tuning to desired power ranges for maximum efficiency.

A COMPLETE LINE
Clayton Chassis Dynamometers are available in various single axle and twin axle models, with capacities from 150 to 800 rear wheel horsepower.

Clayton Chassis Dynamometer installation at 5-acre "model shop" operated in Miami, Florida, by Ryder Truck Rental for maintenance of 1100 vehicles in Miami District. The plant is a prototype for proposed Ryder shops in other cities.



After periodic engine overhauls, all Ryder Truck Rentals units are subjected to rigid indoor road tests on the Clayton Chassis Dynamometer to test engine under actual power load conditions before being restored to road service.

Clayton

CHASSIS & ENGINE DYNAMOMETERS

CLAYTON MANUFACTURING COMPANY
433 N. Temple City Blvd., El Monte, California

312

January News Roundup

Continued from Page 181

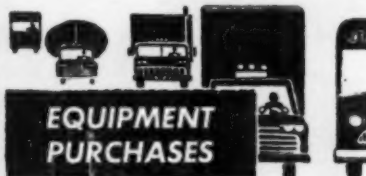
Southern Governor's Conference—has given its approval of efforts to develop compacts between the states covering driver license issuance and revocation and for other methods of improving highway safety.



Aero Mayflower Transit Co., Indianapolis, Ind., announces that 46 of the company's van operators recently received American Trucking Assns.' safety awards for records of from one to 13 years of safe driving.

Bruce Motor Freight, Inc., and Bruce Transfer & Storage Co., Des Moines, Iowa, presented safe driving awards to 100 truck drivers. Records ranged from one to 13 years.

Western Express Co., Cleveland, Ohio., received two more "Million-Mile-No-Accident" awards this year for a total of eight such awards in the past seven years. Transportation Underwriters, Inc., presented the two trophies to Western during a luncheon at Lakeshore Country Club honoring the company's 156 drivers.



Western Fruit Express Co.—20 40-ft aluminum-van reefer trailers from Brown Trailer Division, Clark Equipment Co., Michigan City, Ind. The reefers are for use in piggy-back transport of fruits and other perishables via the Great Northern Railway.

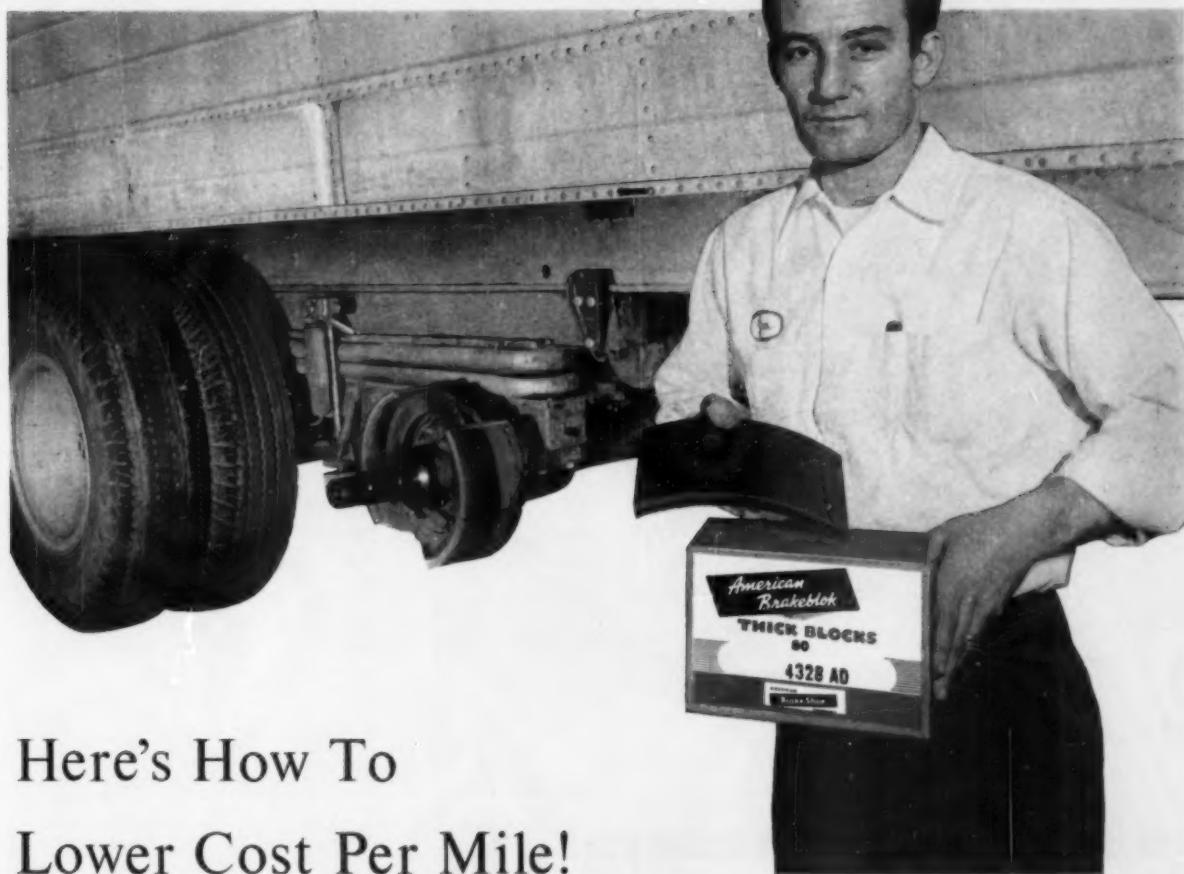
More details? Circle 451 on reply card

Riverside Cement Co., Oro Grande, Cal.—18 Kenworth tractors as replacement units. The purchase included 14 Model No. 921's and four Model No. 922's. All are powered by Cummins 220-hp diesel engines.

More details? Circle 452 on reply card

National Brewing Co., Baltimore, (TURN TO NEXT PAGE, PLEASE)

SERVICE TIP



Here's How To Lower Cost Per Mile!

The kind of brake lining you use on your trucks and trailers is an important factor in cost per mile because

- top quality lining lasts much longer, saves replacement cost
- more mileage means fewer “tear-downs”—less “down-time”.

Here are 5 ways you can lower your fleet cost per mile:

- ① Use only the best brake lining—American Brakeblok. It's easier to install, longer-lasting, more efficient in operation.
- ② Be sure it's installed properly. If you do it in your own shop, see that your mechanics check drums and shoes carefully, keep blocks free from grease and dirt.
- ③ Make sure your brakes are adjusted properly, that the heat generated by stopping is balanced out over

all the blocks so that damage from excessive heat is eliminated.

- ④ Have your brakes inspected regularly. Correct mal-adjustments before they develop into costly trouble.
- ⑤ Educate your drivers to treat brakes properly — to avoid concentrated heat generation, to use “engine braking” whenever possible, to drive in such a way that sudden stops are unnecessary, to report any wheel noises to your maintenance department.



*American
Brakeblok®*

P. O. BOX 21 • BIRMINGHAM, MICHIGAN

AMERICAN BRAKEBLOK

January News Roundup

Continued from Page 182

Md.—24 new compact-design International Model No. BC-164 and BC-174 drop-frame retail delivery trucks. More details? Circle 453 on reply card

Swift & Co., Evansville, Ind.—two specially designed, custom-built reefers from Brown Trailer Division, Clark Equipment Co. More details? Circle 454 on reply card

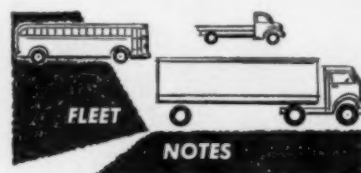
United Parcel Service, NYC—200 International Harvester multi-stop delivery units with Metro-Lite bodies, as replacement vehicles. More details? Circle 455 on reply card

Green Spring Dairy, Baltimore, Md.—135 International Harvester Model No. B-160 trucks with refrigerated bodies, as replacement units. More details? Circle 456 on reply card

Ringsby Truck Lines, Denver, Colo.—five new temperature-controlled tank trailers for use by the company's

new Bulk Commodity Division specializing in hard-to-haul fluids and granular products. More details? Circle 457 on reply card

Skaff's Superior Dairies, Jacksonville, Fla.—new White Model No. 2000 trucks with 14-ft refrigerated bodies as additional equipment for the delivery fleet. More details? Circle 458 on reply card



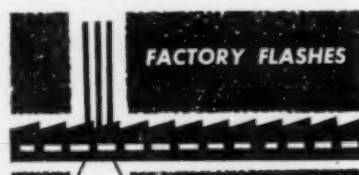
Truckmen's Compensation Safety Group #141, New York State, has just announced the twentieth consecutive dividend on total premiums paid by its nearly 300 trucking and warehousing member companies, all of whom operate in New York State.

Coincident with the dividend announcement was that of the appointment of Nathan Sanders to head the claims department for the Group.

Central Soya, Fort Wayne, Ind., has named Harley Donnell as manager of the company's newly formed Truck Department.

William McCullough Transportation Co., Hartford, Conn., has opened a new terminal and "Sea-landport" at Thompsonville, Conn. John Tanner is manager of the new facility.

Ira Wilson & Sons, Detroit, announced recently that its president, Charles L. Wilson, has been elected President of the American Automobile Assn.



Blackhawk Automotive Division, Milwaukee, Wis., has appointed The Brady Co., Milwaukee and Appleton, Wis., as its new advertising agency. Burt Hotvedt, Brady vice president, is serving as account supervisor to Blackhawk.

The Bendix Corp., Marshall-Eclipse Division Troy, N. Y. has announced the retirement of Dow Carpenter, district sales manager for the division in Southern California and Arizona.

George Carson of Los Angeles is replacing Mr. Carpenter.

Dorman No. 1U
Add-A-Bin Unit

Each Drawer: 5" X 2 7/8" X 2 1/4"

CLICK . . . and they're
INTERLOCKED

Pat. No. 2,237,175

DORMAN'S transparent Add-A-Bins® for small parts

Revolutionize your small parts storage system with Dorman Add-A-Bins of crystal-clear transparent plastic. The patented interlocking steel shells can be built into a sturdy unit of any size or shape. Whether you buy them individually or in factory-assembled units, you can always add more by simply interlocking additional Add-A-Bins . . . on top . . . on the bottom . . . on the sides. Drawers have rounded corners, are double-reinforced front and back, have full width pull. Contents are easily identified . . . sizes printed on removable acetate cards . . . movable dividers for additional coverage.

buy your fasteners with a place to stock them
Hundreds of Dorman fasteners and small parts . . . bolts, nuts, washers, screws, cotter pins . . . to name a few . . . parts every service shop needs every day . . . available in clear styrene Add-A-Bins. You can build a complete time-saving storage unit right on the work bench as you buy quality Dorman Products. Also available empty.

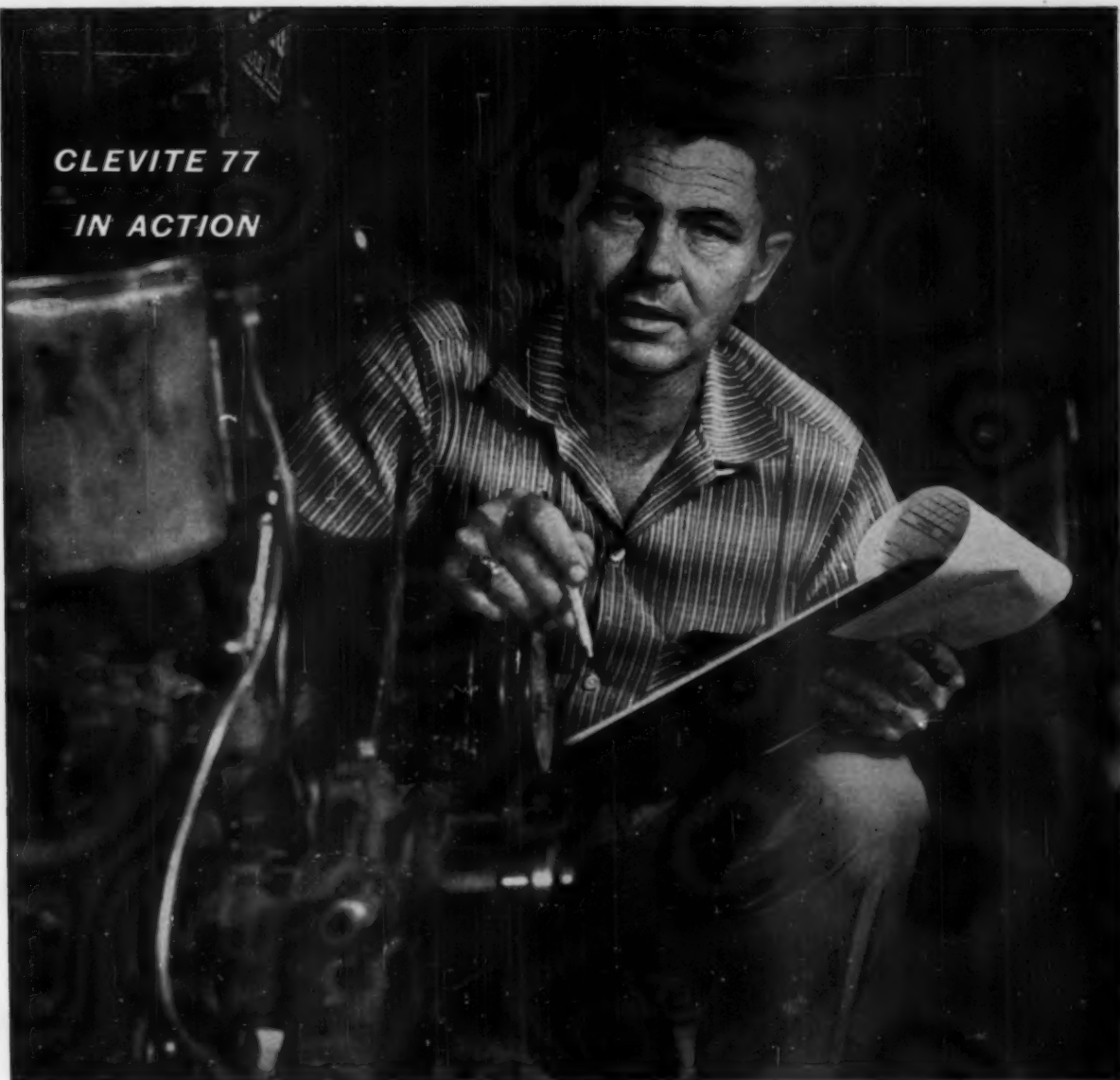
The Quality Line That's Easy to Find

DORMAN PRODUCTS

DORMAN PRODUCTS, INC., CINCINNATI 37, OHIO — Los Angeles — New York — Toronto

CLEVITE 77

IN ACTION



"Clevite 77? They're the best . . .

. . . we've been using them for as long as I can remember. With more than 150 over-the-road units to keep rolling at a profit, we want only the highest quality parts in our engines. That's why we use Clevite 77 bearings—we know they'll do a top job."

Most fleet operators, like Mr. Fears, know that Clevite 77 bearings have the built-in quality to perform at a profit. Their patented tri-metal construction gives longer, trouble-free performance. For your next engine overhaul, get Clevite 77 from your NAPA jobber—he has a complete stock.

states R. O. Fears, Shop Superintendent
Delta Motor, Incorporated
Jackson, Mississippi

MONMOUTH Engine Bearings

CLEVITE SERVICE: Cleveland Graphite Bronze • Division of Clevite Corporation • Cleveland 3, Ohio





CHEVROLET **IES** **"WALKS" WHEELS OVER**
FRONT INDEPENDENT SUSPENSION **TRUCK-BUSTING BUMPS!**

Chevrolet truck wheel action on rough road surface,
as depicted by 4-stage stop-action photography.

CHEVROLET IFS PROTECTS YOUR PROFITS THESE THREE WAYS:

1 Rides down high maintenance costs. When a bump looms up, Chevy's independently suspended front wheels "walk" right over it. Most road shocks and jolts never reach the chassis, cab or body. The truck rides *smoothly*, takes less of a beating, stays in cost-saving shape longer. Your income doesn't dribble away in big repair bills. And you don't lose money through excessive downtime, either.

2 Rides cargoes over rough spots with less damage . . . minimum loss. Thanks to those same "walking wheels," loads don't do much bouncing in the body of a '61 Chevy truck. That means you don't have to contend with undue cargo damage that eats away at your earnings. (Chevy's load-tailored rear suspension helps protect cargoes, too.) This sure protection for fragile loads—and profits—is standard in 1961 Chevrolet trucks of every weight class.

3 Rides drivers through with less fatigue—for tighter schedules. Wait till you see how Chevy front wheel action works to eliminate tiring shimmy and steering-wheel fight. It means that the man at the controls can stay there longer with less fatigue—stay on schedule and do a bigger day's work. (Another reason you can look for faster schedules is that Chevy's bump-beating wheel action allows faster safe speeds on rough roads.)

That gives you an idea of how Chevy Independent Front Suspension works to move you ahead in the money-making department. And it's available in 165 Chevrolet models for '61, from new Corvair 95's to 36,000-lb. GVW tandems. Check it out with a demonstration ride at your Chevrolet dealer's, sometime soon. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

INDEPENDENT FRONT SUSPENSION



In Chevy, each front wheel, suspended independently, is free to step cleanly over bumps (see left). Each works smoothly to reduce objectionable jolts so characteristic with I-beam axle design (right). Working with load-tailored rear suspensions in every weight class, I.F.S. provides the basis for profit-protecting performance that's unmatched by I-beam axle trucks.

I-BEAM AXLE DESIGN



1961 CHEVROLET STURDI-BILT TRUCKS

CHEVROLET



Peanuts Characters © 1950 United Feature Syndicate, Inc.

We like what you propose, Charlie Brown. As you mentioned, Falcon's gas and oil savings are terrific . . . up to 30 miles on a gallon and 4,000 miles between oil changes will gladden any fleet owner's heart! Then, too, tires, replacement parts, (and in most states) licensing and insurance also cost less! And, as any fleet owner who has shopped the field will tell you, Falcon is America's very lowest-priced 6-passenger car*. . . actually priced as much as \$505† less than other comparably equipped compacts! So see your Ford Dealer. Even more important, take a drive in the new '61 Falcon and see why it's America's best-selling compact—by far!

FORD DIVISION, Ford Motor Company.

*Based on a comparison of manufacturers' suggested retail delivered prices
†Based on similar comparison of deluxe 4-door sedans equipped with radio, heater and automatic transmission

THE FLEET CAR THAT SAVES YOU MORE



FORD Falcon '61

PM checks . . .

Continued from Page 103

Following—as an example—is the list of detailed instructions carried on Darling's Red PM inspection sheets. Your operation is at least somewhat different, so you can't copy them exactly . . . but they will give you some idea how you could prepare a similar system. . . .

RED INSPECTION

ENGINE & ACCESSORIES

- RED 1. a. Inspect fan belt for wear. Discard if frayed, cracked or oil-soaked. Dual belts must be replaced by matched pairs.
b. Check belt tension. Deflection $\frac{5}{16}$ in. at center of longest span.
c. Check alignment.
d. Check water level.
e. Check anti-freeze strength.
- RED 2. a. See if starter turns engine over at normal speed. If sluggish, locate cause such as defective battery, loose connections, etc.
b. Check engine for easy starting.
c. Check for unusual noise or vibration at idle and higher speeds.
d. Check oil pressure at idle and higher speeds.
- RED 3. a. Check fuel leaks.
b. Check air leaks.
c. Check oil leaks.
d. Check exhaust leaks.
e. Check water leaks. Inspect all flanges, gaskets, hoses, covers, manifolds, and connections.
- RED 4. a. Turn primary fuel filter shaft

(TURN TO PAGE 190, PLEASE)

"Old Crusty"



Maine's "Million Dollar Lobster" was a trade representative for the state in an exhibit at a recent convention in Texas. The gold-plated crustacean, which originally weighed 2½ lb, was hauled in the same trailer by land and sea from Maine to Texas. Sea-Land Service, Inc., Boston, Mass., and Hemingway Bros. Interstate Trucking Co., Portland, Me., took part in transporting "Old Crusty."

Now!
the New

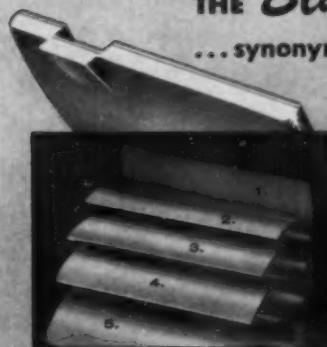
McQUAY-
NORRIS

MI-1000 Engine Bearing



***... longer life under
heavy loads***

THE *Blue Box* LINE.
... synonymous with quality



**the new MI-1000
ENGINE BEARING**

1. Precision Steel Back
2. Sintered Copper-lead Lining
3. Barrier Plate
4. One thousandth of an Inch Babbitt Overlay
5. Pure Tin Flash

Longer engine life—less down time—more economical operation! The new McQuay-Norris **MI-1000** engine bearing insert offers these money-saving and money-making features because they are precision built to withstand heavier bearing loads and higher temperatures.

The **MI-1000** engine bearing has an "extra thin" babbitt lining only .001 of an inch

thick, electrolytically applied on a hard and durable sintered copper-lead base. The **MI-1000** has the fine anti-friction qualities of babbitt plus the terrific strength of copper-lead—so it is easy on the shaft, yet won't pound out under the most severe service.

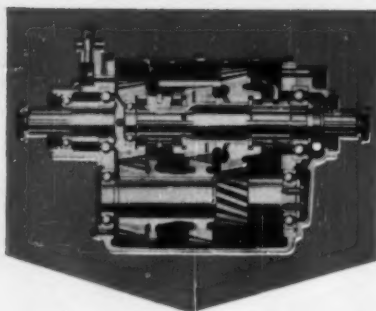
The combination of the **MI-1000** plus McQuay-Norris Heavy Duty, Chrome Control, Leak-Proof Piston Ring set, not only keeps the job running longer, but also cuts gas and oil costs.

Yes, the new McQuay-Norris **MI-1000** engine bearing is a natural for fleet operators. Use them on your next job.

McQUAY-NORRIS MANUFACTURING CO., ST. LOUIS • TORONTO

● More details? Circle 224 on reply card inside back cover





Specify FULLER Specify the MODEL

For heavy duty
trucks and tractors specify the

FULLER '92 SERIES 3-SPEED AUXILIARY

- High capacity
- Widest range of ratios
- Top-mounted power take-off optional
- Low initial cost, reduced maintenance
- Available from all truck manufacturers on specification

92 SERIES (Heavy-Duty) RATIOS

MODEL	SPLITTER RATIOS			DEEP REDUCTION
	High	Inter- mediate	Low	
3-A-92	.74	1.00	2.09	
3-B-92	.84	1.00	1.24	
3-C-92	.75	1.00	2.64	
3-D-92	.75	1.00	1.24	
3-E-92	.84	1.00	2.09	
3-F-92	.84	1.00	2.64	
3-G-92	1.00	1.327	2.09	
3-H-92	1.00	1.327	2.64	

Specify



Specify the MODEL

FULLER TRANSMISSION DIVISION

EATON MANUFACTURING COMPANY
KALAMAZOO, MICHIGAN

PM checks . . .

Continued from Page 188

clockwise two (2) complete turns and drain sludge.

ELECTRICAL & INSTRUMENTS

- RED 5. a. Operate horn.
b. Check windshield wiper operation and speed. Observe condition and travel of blades. Rubber must be live and capable of squeegee action.
c. Check all lights, including signal and instrument panel.
d. Check functioning of all instruments except speedometer.
- RED 6. a. Battery electrolyte level to be minimum of $\frac{1}{8}$ in. above plates.
b. Use only distilled water.
c. Cable connections and ground strap mounting tight.

CLUTCH

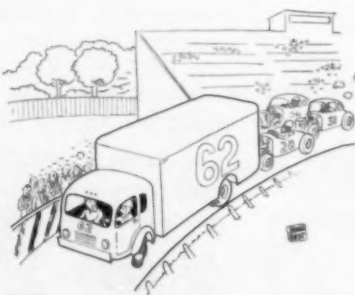
- RED 7. a. Free pedal clearance minimum $\frac{1}{2}$ in.
b. With engine running, push pedal to floor and shift into low gear. Continued gear clashing indicates dragging clutch.

FRONT AXLE STEERING & SPRINGS

- RED 8. a. Check for excessive steering wheel play.
b. Check drag link and cross steering tube ball sockets for looseness.
- RED 9. a. Inspect for shifted axle—broken center bolt.
b. Inspect for broken spring leaves.

TRANSMISSION & AUXILIARY

- RED 10. a. Inspect for oil leaks at seals, covers and plugs. Leaks may be caused by loose capscrews or nuts, worn or broken gaskets, overfilling or clogged breathers.
b. Inspect bell housing cap screws and nuts.
c. Inspect midship transmission mounting arrangement.
- RED 11. a. Monoshift operation: Depress and release clutch pedal; select opposite range with flipper; then slowly depress pedal and at same time lightly try to go into any gear. Automatic shift should be heard approximately $\frac{1}{2}$ in. before "raking" noise stops. If above



"The main thing is to get the lead right off and you've got the race won!"

condition is not obtained, adjust as per Bulletin No. 14 under "Transmission." Bulletin available at office when needed. Such adjustment is not to be made without reference to the bulletin.

HAND BRAKE & PROPELLER SHAFT

- RED 12. a. Adjust hand brake lever if there is more than $\frac{1}{4}$ travel.
b. An Orscheln type hand lever must click over center with a hard pull. Turn knob to right to tighten.
- RED 13. a. Check universal joints for looseness and leaks.
b. Check flanges for looseness—particularly at hand brake.
c. Check splines for wear.
- RED 14. a. Inspect center bearing for wear.
b. Inspect for loose center bearing hanger bolts.
c. Inspect for cracked center bearing support.

REAR AXLE & SPRINGS

- RED 15. a. Inspect for carrier oil leaks. Leaks may be caused by loose capscrews, worn or broken gaskets, worn seals, clogged breather or overfilling.
b. Check axle shaft drive flange screws for looseness.
- RED 16. a. Inspect springs for broken leaves.
b. Inspect for loose U-bolts.
c. Inspect for shifted axle—broken center bolt.

AIR BRAKES

- RED 17. a. Drain air tanks.
- RED 18. a. Adjust slack adjusters to equalize push rod travel. Keep stroke of rods as short as possible without brakes dragging. Normal adjustment is $\frac{1}{8}$ in. stroke on front chambers and 1 in. on rear. Angle between arm and chamber push rod should be approximately 90 deg with brakes full on.

BODY, CAB, TIRES & CHASSIS

- RED 19. a. Inspect hood.
b. Inspect fenders.
c. Inspect running boards.
d. Inspect license plates.
e. Check operation of hood latches.
f. General check for damage or looseness.
- RED 20. a. Report any broken, discolored or etched glass.
b. Inspect door stops.
c. Inspect door hinges.
d. Inspect door wedges.
e. Check operation of door latches.
f. Check operation of window mechanism.
g. Inspect door vent windows.
h. Check condition of mirrors.
i. Inspect seat cushion and back.
- RED 21. a. Tighten all rim lug nuts to approximately 200 lb ft torque.
b. Report any case of uneven or unusual tire wear or bent rims.
c. Match all dual tires requiring matching (round top type).
d. Inflate all tires to standard pressure. All valve caps in place.
e. Balance or check balance of front tires.
- RED 22. a. Check fifth wheel mounting. Inspect for cracks.
b. Check latching mechanism.
- RED 23. a. Dynamometer test.

END

Please Resume Reading Page 104



"RoadRangers boost our profits, and we can prove it," says John N. Hall, President, Hall's Motor Transit Company. Operating figures show that RoadRangers give

**13.9% savings on fuel . . .
10.8% reduction in trip time**

Hall's Motor Transit Company, Sunbury, Pa., expects to gross over \$17-million in 1961. To achieve this goal, Hall's over-the-road fleet will log about 15 million miles and haul more than a billion pounds of freight.

"With an operation this size," says President John N. Hall, "we need to keep detailed figures on the performance and reliability of every unit in our fleet. Comparative studies prove that Fuller RoadRangers have been

responsible, in large measure, for our trouble-free operation, substantial fuel savings and overall efficiency."

Nearly 93% of Hall's road tractors are Internationals equipped with Fuller RoadRANGERS. 286 of the units are R-200s with R-46 8-speed ROADRANGERS and 23 are RD-225 Diesels with R-96 10-speed ROADRANGERS.

Hall's ROADRANGER-geared tractors average 13.9% better fuel mileage than rigs using the same engine

but with transmissions of another manufacturer. Fuller-geared trucks cut trip time an average of 10.8%.

Maintenance figures have been impressive, too. Says Mr. Hall, "Road failures have been reduced to an absolute minimum, and we have several ROADRANGER-equipped tractors with over 125,000 miles that haven't cost us a cent in unscheduled maintenance. The ROADRANGER is truly an outstanding transmission."

FULLER TRANSMISSION DIVISION
EATON MANUFACTURING COMPANY
KALAMAZOO, MICHIGAN

Sales & Service: West. Dist. Branch, Oakland 6, Cal. • Southwest Dist. Office, Tulsa 3, Okla. • Automotive Products Co., Ltd., Brock House, Langham St., London W.1, England, European Rep.

INDEX TO ADVERTISERS

This Advertisers' Index is published as a convenience and not as part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert

A		Fitzgerald Mfg. Co.151		O	
AC Spark Plug Div.	14-15, 47	Agency: Wilson, Haight, Welch & Grove, Inc.		Oakite Products, Inc.	16
Agency: D. P. Brother & Co.				Agency: Marsteller, Rickard, Gebhardt & Reed, Inc.	
Albertson & Co., Inc.	165-166	Ford Motor Co.112, 188		P	
Agency: Stevenson & Assos.		Fleets Div.26 thru 31		P & D Mfg. Co. Inc.	130
American Brakeblok Div.	183	Agency: J. Walter Thompson Co.		Agency: La Porte & Austin, Inc.	
Agency: Allman Co., Inc.		Fruehauf Trailer Co.178-179		Packard Electric Div.	146
American Steel Foundries	74	Agency: The Allman Co.		Agency: Campbell Ewald Co.	
Agency: Erwin Wasey, Ruthrauff & Ryan Inc.		Fuller Mfg. Co.190-191		Page & Page Co.	72
Armco Steel Corp.	97	Agency: Curtiss, Quinlan, Keene, Peck, Inc.		Agency: Elwood Enke Adv.	
Agency: Marsteller, Rickard, Gebhardt & Reed, Inc.		G		Parish Pressed Steel Div. Dana Corp.	92
Arrow Safety Device Co.	12	General Electric Corp.	88	Agency: The Allman Co.	
Agency: Atlantic Industrial Publ., Inc.		Agency: Batten, Barton, Durstine & Osborn, Inc.		Parts Specialties Co.	181
Autocar Div. White Motor Co.	163	General Motors Corp.	37 thru 44	Perfect Circle Corp.	Back Cover
Agency: Fuller & Smith & Ross, Inc.		Agency: McCann-Erickson, Inc.		Agency: Compton Adv.	
Auto Specialties Mfg. Co.	3rd Cover	Goodrich Co., B. F. (Truck Tires)	8	Plymouth Div. Chrysler Corp.	83
Agency: Paxson Adv., Inc.		Agency: Griswold-Eshleman Co.		Agency: N. W. Ayer & Son, Inc.	
B		Goodyear Tire & Rubber Co.	25	R	
Bacharach Industrial Instrument Co.	160	Metal Products Div.	18-19	Revere Copper & Brass, Inc.	171
Agency: W. S. Hill Co.		Agency: Kudner Agency, Inc.		Agency: Adams & Keyes, Inc.	
Bartlett Trailer Corp.	95	Grey-Rock Div.	51	Reynolds Mfg. Co.	135
Agency: Camilla Adv. Agency		Agency: Gray & Rogers Adv.		Agency: Ralph Nelms, Adv.	
Bendix Corp.		Gulf Oil Corp.	158-159	Riker Mfg. Co. Inc.	160
Products Div.	147	Agency: Ketchum, MacLeod & Grove, Inc.		Agency: Bracco Advertising	
Marshall-Eclipse Div.	75	H		Rockford Clutch Div.	86
Agency: MacManus, John & Adams		Hansen Mfg. Co., A. L.	137	Agency: E. R. Hollingsworth & Associates	
Betts Machine Co.	151	Agency: Paul J. Steffen Co.		Rockwell-Standard Corp.	
Agency: Jonethis-Larson Adv.		Hastings Mfg. Co.	169	Transmission & Axle Div.	55
Black & Decker Mfg. Co.	152-153	Agency: Bozell & Jacobs, Inc.		Agency: MacFarland Aveyard & Co.	
Agency: Van Sant, Dugdale & Co.		Hein-Werner Corp.	150	S	
Bosch Corp., Robert	65	Agency: Arthur R. Mogge Inc.		Saginaw Steering Gear Div.	60
Agency: E. T. Howard Co., Inc.		Hertz Corp.	4	Agency: D. P. Brother Inc.	
Bostrum Corp.	23	Agency: Needham, Louis & Brorby, Inc.		Schrader's Son, A.	113
Agency: Buchen Co.		Homestead Valve Mfg. Co.	89	Agency: G. M. Hasford Co.	
Branick Products Co. Inc.	140	Agency: Van Sant, Dugdale & Co.		Sealed Power Corp.	127, 173
Agency: Manufacturers' Adv.		I		Agency: Roche, Rickard & Cleary Inc.	
Breeze Corp.	149	Illinois State Tool Highway Commission	181	Sav-T Engineering Co.	176
Agency: Adams & Keyes, Inc.		Agency: Geyer, Morey, Madden & Ballard, Inc.		Agency: Parker Advertising	
Budd Company	66-67	International Harvester Co.	6-7	Sherwin-Williams Co.	162
Agency: Altken-Kynett Co., Inc.		Agency: Young & Rubicam, Inc.		Agency: Griswold-Eshleman Co.	
C		K		South Chester Corp.	54
Carlisle Corp.	176	Kelsey-Hayes Co.	46	Agency: Eldridge Co.	
Agency: Burke Bartlett Co., Inc.		Agency: Zimmer Keller & Calvert, Inc.		Spray Products Corp.	151
Century Gas Equipment	129	Kilgore, Inc.	3	Agency: Richard R. Lukasik Adv.	
Agency: Setco Adv. Co.		Agency: Ovesey & Straus, Inc.		Standard Oil Co. (Calif.)	22
Champion Spark Plug Co.	76-77	Kim Hotstart Mfg. Co.	176	Agency: Batten, Barton, Durstine & Osborn, Inc.	
Agency: J. Walter Thompson Co.		Agency: Showaace, Coons, Shotwell		Stant Mfg. Co.	180
Chevrolet Motor Div.	57, 186-187	King-Seeley Corp.	138	Agency: Associated Adv. Agency,	
Agency: Campbell-Ewald Co.		Agency: Howell & Young Adv., Inc.		Stemco Mfg. Co.	45
Chicago Rawhide Mfg. Co.	161	Kinnear Mfg. Co.	181	Agency: Goodloe Stuck Adv.	
Agency: Walldie & Briggs, Inc.		Agency: Wheeler, Kight & Gainey Inc.		Agency	
Clayton Mfg. Co.	182	Kysor Heater Co.	2nd Cover	Stewart-Warner Corp.	20-21
Agency: Franklin Associates		Agency: Ideas Advertising, Inc.		Agency: Bozell & Jacobs, Inc.	
Clevite Corp.	185	L		Studebaker-Packard Corp.	17
Agency: Duffy, McClure & Wilder		Lee Rubber & Tire Corp.	13	Agency: D'Arcy Adv. Co.	
Cooper Tire & Rubber Co.	80	Agency: Gray & Rogers		T	
Agency: Maurice Mullay, Inc.		Leece-Neville Co.	58-59	Texaco, Inc.	61 thru 64
D		Agency: Griswold-Eshleman Co.		Agency: G. M. Hasford Co.	
Dana Corp.	52-53	Lipe Rollway Corp.	69	Timken Roller Bearing Co.	82
Agency: Allman Co., Inc.		Agency: Barlow Adv.		Agency: Batten, Barton, Durstine & Osborn, Inc.	
Delco-Remy Div.	78-79	Lyncoach & Truck Co., Inc.	131	Thompson-Ramo-Wooldridge Corp.	90-91
Agency: Campbell-Ewald Co.		Agency: Fred Riger Adv. Agency		Agency: Griswold-Eshleman Co.	
Detroit Diesel Engine Div.	154 thru 157	M		Torque Wrench	128
Agency: Kudner Agency Inc.		McGraw-Edison Co.	32	Agency: Ross Llewellyn Inc.	
Diamond T. Motor Truck Co.	175	Agency: Frederick C. Williams & Assoc.		Triple-A-Specialty Co.	136
Agency: Roche, Rickard & Cleary, Inc.		McQuay-Norris Mfg. Co.	189	Tung-Sol Electric, Inc.	50
Ditzler Color Div.	56	Agency: D'Arcy Adv. Co.		Agency: E. M. Freystadt Assoc., Inc.	
Agency: Maxon, Inc.		Macchi & Co.	151	U	
Dorman Products, Inc.	184	Agency: Geo. C. McNutt Adv.		United Engine & Machine Co.	142
Agency: Associated Adv. Agency, Inc.		Mack Trucks, Inc.	10-11	Agency: Walter N. Hancock Adv.	
Dorsey Trailers	144-145	Agency: Doyle, Kitchen & McCormick, Inc.		United Motor Service Div.	48-49
Agency: Morris Timbes, Inc.		Meyercord Co.	181	Agency: Campbell-Ewald Co.	
E		Agency: John D. Morgan, Inc.		United States Steel Corp.	68
Echlin Mfg. Co. United Parts Div.	167	Midland-Ross Corp.	170	Agency: Batten, Barton, Durstine & Osborn, Inc.	
Agency: Humbert & Jones, Inc.		Agency: Allman Co., Inc.		W	
Eis Automotive Corp.	143	Mobil Oil Co., A Div. of Socony Mobil Oil Co., Inc.	84-85	Watson Co., H. S.	87
Agency: Furman Co., Inc.		Agency: Compton Adv., Inc.		Agency: Bonfield Associates, Inc.	
Enjay Chemical Co. A Div. of Humble Oil & Refining Co.	93	Mohawk Rubber Co.	148	Weidenhoff Corp.	160
Agency: McCann-Erickson, Inc.		Agency: Carr Liggett Adv. Inc.		Agency: Mohawk Adv. Co.	
Erie Malleable Iron Co.	174	Mopar Div. Chrysler Corp.	70-71	White Motor Co.	116-117
Agency: John Harder Fenstermacher, Inc.		Agency: N. W. Ayer & Son, Inc.		Agency: Fuller & Smith & Ross, Inc.	
F		N		Wilkening Mfg. Co.	1
F & B Mfg. Co.	164	Nordic Trailer Co.	139	Agency: Altken-Kynett Co.	
Agency: Hanson & Stevens, Inc.		Agency: Clark & Bobertz, Inc.		Z	
Federal-Mogul-Bower Bearings Inc.		O		Zollner Corp.	73
Federal-Mogul Services Div.	123, 141	P		Agency: McDaniel, Fisher & Spelman Co.	
Agency: Ross Roy, BSF & D Inc.		Q		Y	
Firestone Tire & Rubber Co.		R		Z	
Tires Div.	94	S		Z	
Agency: Campbell-Ewald Co.		T		Z	

for quick product information



1

Leave the reply cards at right. Turn to the first page of the WH. you have to do is circle on one of of the items that interest you— mail. CCJ does all the rest. We'll reaches the right person—at no

2

Same free service applies to th advertisers in this issue. For fu circle on the same reply card adjacent to the ads about the p like to know more about.

**to find out
is as easy as**

3

And—if there's some problem ache, don't reach for the aspirin. at the right instead. It puts CC. helping to find the answer to you

to write the editors



in publications for

How to avoid interstate business and tax problems in your fleet operation is explained in the State Tax Guide, just released by Prentice-Hall, Inc., Englewood Cliffs, N. J. Businessmen who do not employ special agencies or tax experts to handle problems involved in interstate operation will find the new guide particularly helpful. Cross references and charts provide a complete tax-setup picture for the entire U. S.

For more information circle 305 on reply card inside back cover

catal
cable
and
No.
Batt
For

Turn over. You'll find many more interesting reports for fle

ight folded out as they are now.
WHAT'S NEW section. Now all
e of the reply cards the numbers
ou—then drop the card in the
We'll see to it that your request
no cost to you.

to the products described by the
er further details on these, just
card the numbers that appear
the products and services you'd

blem giving you a special head-
pirin. Use the special reply card
CCJ's editors to work for you—
o your question.

r fleets

Cable and wire
catalog shows all types of automotive
cable and components for fleet shops
and heavy duty equipment. Catalog
No. 60 is from the Electric Storage
Battery Co., Cleveland, Ohio.
For free copy circle 306 on reply card

fleets on the other side

COMMERCIAL CAR JOURNAL

COMMERCIAL CAR JOURNAL

COMMERCIAL CAR JOURNAL



For quick information about items described in this issue, circle the appropriate numbers, fill out the return address blanks below and mail

100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480
101	121	141	161	181	201	221	241	261	281	301	321	341	361	381	401	421	441	461	481
102	122	142	162	182	202	222	242	262	282	302	322	342	362	382	402	422	442	462	482
103	123	143	163	183	203	223	243	263	283	303	323	343	363	383	403	423	443	463	483
104	124	144	164	184	204	224	244	264	284	304	324	344	364	384	404	424	444	464	484
105	125	145	165	185	205	225	245	265	285	305	325	345	365	385	405	425	445	465	485
106	126	146	166	186	206	226	246	266	286	306	326	346	366	386	406	426	446	466	486
107	127	147	167	187	207	227	247	267	287	307	327	347	367	387	407	427	447	467	487
108	128	148	168	188	208	228	248	268	288	308	328	348	368	388	408	428	448	468	488
109	129	149	169	189	209	229	249	269	289	309	329	349	369	389	409	429	449	469	489
110	130	150	170	190	210	230	250	270	290	310	330	350	370	390	410	430	450	470	490
111	131	151	171	191	211	231	251	271	291	311	331	351	371	391	411	431	451	471	491
112	132	152	172	192	212	232	252	272	292	312	332	352	372	392	412	432	452	472	492
113	133	153	173	193	213	233	253	273	293	313	333	353	373	393	413	433	453	473	493
114	134	154	174	194	214	234	254	274	294	314	334	354	374	394	414	434	454	474	494
115	135	155	175	195	215	235	255	275	295	315	335	355	375	395	415	435	455	475	495
116	136	156	176	196	216	236	256	276	296	316	336	356	376	396	416	436	456	476	496
117	137	157	177	197	217	237	257	277	297	317	337	357	377	397	417	437	457	477	497
118	138	158	178	198	218	238	258	278	298	318	338	358	378	398	418	438	458	478	498
119	139	159	179	199	219	239	259	279	299	319	339	359	379	399	419	439	459	479	499

Jan. 1961 (do not mail after Mar. 31, 1961)

NAME POSITION
NAME OF FLEET SERVICE NO
ADDRESS FACILITIES? YES
No. of vehicles: Trucks.....Tractors.....Trailers.....Pcar. Cars.....Other.....

WHAT WOULD YOU LIKE TO KNOW MORE ABOUT?

ASK THE EDITOR—a quick way to get more information

Dear Editors:

month-day-year

COMMERCIAL CAR JOURNAL

COMMERCIAL CAR JOURNAL



For quick information about items described in this issue, circle the appropriate numbers, fill out the return address blanks below and mail

100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480
101	121	141	161	181	201	221	241	261	281	301	321	341	361	381	401	421	441	461	481
102	122	142	162	182	202	222	242	262	282	302	322	342	362	382	402	422	442	462	482
103	123	143	163	183	203	223	243	263	283	303	323	343	363	383	403	423	443	463	483
104	124	144	164	184	204	224	244	264	284	304	324	344	364	384	404	424	444	464	484
105	125	145	165	185	205	225	245	265	285	305	325	345	365	385	405	425	445	465	485
106	126	146	166	186	206	226	246	266	286	306	326	346	366	386	406	426	446	466	486
107	127	147	167	187	207	227	247	267	287	307	327	347	367	387	407	427	447	467	487
108	128	148	168	188	208	228	248	268	288	308	328	348	368	388	408	428	448	468	488
109	129	149	169	189	209	229	249	269	289	309	329	349	369	389	409	429	449	469	489
110	130	150	170	190	210	230	250	270	290	310	330	350	370	390	410	430	450	470	490
111	131	151	171	191	211	231	251	271	291	311	331	351	371	391	411	431	451	471	491
112	132	152	172	192	212	232	252	272	292	312	332	352	372	392	412	432	452	472	492
113	133	153	173	193	213	233	253	273	293	313	333	353	373	393	413	433	453	473	493
114	134	154	174	194	214	234	254	274	294	314	334	354	374	394	414	434	454	474	494
115	135	155	175	195	215	235	255	275	295	315	335	355	375	395	415	435	455	475	495
116	136	156	176	196	216	236	256	276	296	316	336	356	376	396	416	436	456	476	496
117	137	157	177	197	217	237	257	277	297	317	337	357	377	397	417	437	457	477	497
118	138	158	178	198	218	238	258	278	298	318	338	358	378	398	418	438	458	478	498
119	139	159	179	199	219	239	259	279	299	319	339	359	379	399	419	439	459	479	499

Jan. 1961 (do not mail after Mar. 31, 1961)

NAME POSITION
NAME OF FLEET SERVICE NO
ADDRESS FACILITIES? YES
No. of vehicles: Trucks.....Tractors.....Trailers.....Pcar. Cars.....Other.....



FIRST CLASS
PERMIT No. 18
PHILA. 39, PA.

BUSINESS REPLY MAIL

No postage necessary if mailed in the United States

POSTAGE WILL BE PAID BY
COMMERCIAL CAR JOURNAL
Reader Service Dept.
Chestnut & 56th Sts.
Philadelphia 39, Pa.



FIRST CLASS
PERMIT No. 18
PHILA. 39, PA.

BUSINESS REPLY MAIL

No postage necessary if mailed in the United States

POSTAGE WILL BE PAID BY
COMMERCIAL CAR JOURNAL
Bart Rawson, Editor
Chestnut & 56th Sts.
Philadelphia 39, Pa.

For easy use, fold out before turning to What's New section



FIRST CLASS
PERMIT No. 18
PHILA. 39, PA.

BUSINESS REPLY MAIL

No postage necessary if mailed in the United States

POSTAGE WILL BE PAID BY
COMMERCIAL CAR JOURNAL
Reader Service Dept.
Chestnut & 56th Sts.
Philadelphia 39, Pa.



in publications for fleets

It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover

Heater parts
are illustrated, labeled and described for all cars from 1930 through 1960 in a 1960-61 Fall and Winter Heater Parts Catalog from Everhot Products Co., Chicago. It includes Everhot's complete line of universal heater parts and fittings and small motors for automotive applications.

For free copy circle 310 on reply card

Impactools
for all uses in your fleet shop are described in a newly-published manual (Form No. 5191A) from Ingersoll-Rand Co., New York City. Also included are time studies on nine common service operations on 16 makes of vehicles. The new tools are said to increase work output in your shop from five to 20 per cent.

For free copy circle 311 on reply card

Hydraulic jet cleaner
made by Sellers Injector Corp., Philadelphia, is illustrated and explained in Bulletin No. 446. Maker says the new "Super Booster" is the most powerful jet tool in its line of cleaning equipment. Installation, operation and maintenance are fully described.

For free copy circle 312 on reply card

Carbon dioxide liquid
as used in the new "Blast Chilling" process (June, page 134) is explained in a new brochure (Form No. ADPC 46A) from Pure Carbonic Co., New York City.

For free copy circle 313 on reply card

Panels for heating or cooling of tanks, drums and other processing and hauling equipment replace pipe coil or jacketing. "Panel-coil" applications are illustrated in new data sheets (Nos. M12 and M13) from Dean Products, Inc., Brooklyn, N. Y.

For free copy circle 314 on reply card

Fleet safetymen can show drivers many hazards that come up in today's driving. A series of three safety films is now available from Shell Oil Co., New York City, which involves a new driver training technique. Shell says the new approach develops better awareness of dangerous situations and ways to avoid accidents. Titled "Perception of Driving Hazards," the series consists of:

Part I—Urban and Suburban—showing hazards in city traffic and on suburban streets.

Part II—Limited Access Highways—showing what to watch for on high-speed expressways and turnpikes.

Part III—Highways and Byways—showing traffic dangers on ordinary highways and secondary roads. These are the places where most accidents happen.

For details on using one or all of the films, circle 307 on reply card

Truck-tire inflation pressures for all sizes and types of tires are listed on a new wall chart from Goodyear Tire & Rubber Co., Akron, Ohio. You'll find a great increase in tire life for your fleet's vehicles if your maintenance man is able to quickly and easily refer to the correct inflation pressure for every tire in use. The chart, "Here's How to Cut Truck Tire Costs," lists sizes from 6.00-16 to 14.00-24 in both tube-type and tubeless tires.

For your free truck-tire inflation chart, circle 308 on reply card

Changes taking place in the transportation industry are the subject of a new booklet, "Changing Patterns in Transportation." Just published by the American Trucking Assn., it describes the effects on highway transportation of such factors as population growth, decentralization of industry, piggyback and even the increase in small cars.

You'll get your free copy if you circle 309 on reply card

Windshield wiper motors and related equipment are subject of a new 110-page catalog from Sprague Devices, Inc., Michigan City, Ind. Applications, parts and prices for Air-Push wipers are given in complete detail along with a wiper motor maintenance manual.

For free copy circle 315 on reply card

Safety is the aim of a new service for private and for-hire motor carriers. Safety Advisory Foundation, Inc. (SAF), Newark, N. J., provides fleet operators with safety programs and methods to coincide with their individual requirements for safe vehicle and terminal operation.

For free copy circle 316 on reply card

Local fleet operators and others whose fleets are mainly straight trucks will find an extra copy of "Who's Who at the Truck Body & Equipment Assn. Annual Convention" comes in handy. Reason is that it lists the name and address of major suppliers of equipment . . . plus names of people to contact for further information. It's a kind of convenient truck body equipment buyers' guide.

For free copy circle 317 on reply card

New taxicabs in both full-size and compact models are described in a new 1961 taxi brochure from Dodge Division, Chrysler Corp.

For free copy circle 318 on reply card

AUSCO

Hydraulic TRUCK TRANSMISSION HANDLER

THE TOUGH ONES REALLY
COME OUT FAST WITH AN AUSCO
TRUCK TRANSMISSION HANDLER!

WE USE IT ON EVERY TRUCK TRANSMISSION JOB
AND FOR REMOVING AND REPLACING
DIFFERENTIALS AND FRONT & REAR AXLE UNITS.



WITH THE
CORVAIR ADAPTER
IT'S THE BEST
WAY YET FOR
REMOVING AND
REPLACING THE
CORVAIR ENGINE &
POWER TRAIN

The D-8200 Truck Transmission Handler
is designed to speed up removal and
replacement of all transmission,
differential, front and rear
axle units weighing up
to 2000 lbs.

D-8200
2000 lb.
capacity

Makes every job safer,
easier and faster. Universal
load adapter fits all
makes and models . . .
tilts 37° forward,
14½° to rear, 11°
left and 11° right.

Easy-to-maneuver on
ball-bearing caster wheels. Raises to 33"
—high enough to transfer work to bench or fixture.

AUTO SPECIALTIES MANUFACTURING CO.

ST. JOSEPH, MICHIGAN

● More details? Circle 125 on reply card inside back cover



PERFECT CIRCLE
PISTON RINGS ARE
BUILT TO TAKE IT



EATING AWAY DROP BY DROP

Moisture and acids formed by combustion can eat away piston rings, much as they eat away mufflers and tailpipes.

Perfect Circle protects against this corrosive wear with extra-thick, solid chrome plating. For abnormally corrosive applications, special alloys are also used. And, Perfect Circle rings are even specially protected from corrosive skin acids during production, packing and installation.

Perfect Circle rings are built to take the toughest engine wear. Insist on Perfect Circles—the most preferred piston rings in all the world.



PERFECT CIRCLE

PISTON RINGS • PRECISION CASTINGS • POWER SERVICE PRODUCTS • SPEEDOSTAT
HAGERSTOWN, INDIANA • DON MILLS, ONTARIO, CANADA

● More details? Circle 126 on reply card inside back cover

